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AMERICAN BEE JOURNAL

October, 1945

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OCTOBER, 1945

343



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American Bee Journal

HAMILTON, ILLINOIS
October 1945 Vol. LXXXV, No. 10

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Associate Editors

M. G. Dadant, Frank C. Pellett,
J. C. Dadant, Roy A. Grout

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1933.**

Of American Bee Journal, published monthly
at Hamilton, Illinois, September 1, 1945.

STATE OF ILLINOIS, }
County of Hancock, } ss.

Before me, a notary public in and for the
state and county aforesaid, personally ap-
peared M. G. Dadant, who, having been duly
sworn according to law, deposes and says
that he is the business manager of the
American Bee Journal and that the follow-
ing is, to the best of his knowledge and
belief, a true statement of the ownership,
management, etc., of the aforesaid publi-
cation for the date shown in the above
caption, required by the Act of August 24,
1912, as amended by the Act of March 3,
1933, embodied in section 537, Postal Laws
and Regulations, printed on the reverse of
this form, to wit:

1. That the name and addresses of the
publishers, editors, and business managers
are:

Publishers: American Bee Journal, Ham-
ilton, Ill.

Editors: G. H. Cale, Hamilton, Ill., F. C.
Pellett, Hamilton, Ill., M. G. Dadant, Ham-
ilton, Ill., R. A. Grout, Hamilton, Ill.

Business Managers: M. G. Dadant, Ham-
ilton, Ill., J. C. Dadant, Hamilton, Ill.

2. That the owners are:

H. C. Dadant, Hamilton, Ill.
J. C. Dadant, Hamilton, Ill.
V. M. Dadant, Hamilton, Ill.
M. G. Dadant, Hamilton, Ill.
C. S. Dadant, Hamilton, Ill.
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R. H. Dadant, Hamilton, Ill.
Louisa G. Saugier, Hamilton, Ill.

3. That the known bondholders, mortga-
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holding one per cent or more of the total
amount of bonds, mortgages, or other se-
curities are: None.

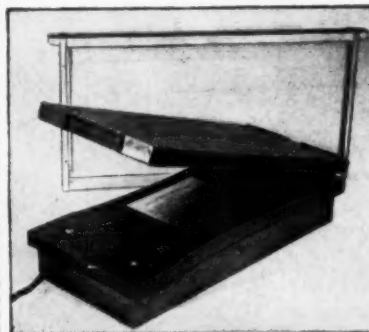
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giving the names of the owners, stockholders,
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the list of stockholders and security holders
as they appear upon the books of the
company but also, in cases where the stock-
holder or security holder appears upon the
books of the company as trustees or in any
other fiduciary relation for whom such trustee
is acting, is given; also that the said two
paragraphs contain statements embracing
affiant's full knowledge and belief as to the
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stockholders and security holders who do
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direct in the said stock, bonds or other
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(Signed) M. G. DADANT,

Business Manager American Bee Journal,
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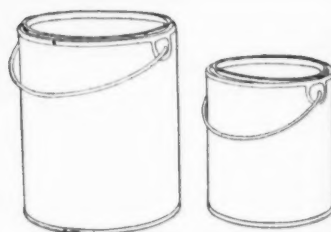


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1 lb. jars, packed 24/c, wt. 12 lbs.	80c per 24
2 lb. jars, packed 12/c, wt. 9 lbs.	52c per 12
3 lb. jars, packed 12/c, wt. 11 lbs.	56c per 12
5 lb. jars, packed 6/c, wt. 10 lbs.	45c per 6
10 lb. jars, packed 10/c, wt. 17 lbs.*	75c per 6

*Stocked F. O. B. Watertown only.

Above prices on glass jars apply F. O. B. any of the shipping points of the G. B. Lewis Company indicated below. Send your order and remittance to the nearest shipping point to save freight.



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5 lb. pails, packed 50/c,	\$3.20
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SPECIAL NOTICE

Prices on all wooden goods, including excluders, are increased 10% by authorization of Office of Price Administration, effective May 1, 1945. (No change in price on other items.

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WATERTOWN, WISCONSIN

Box 825, Albany, 1, N. Y.; Box 683, Lynchburg, Va.; 214 Pearl St., Sioux City, 14, Iowa

WHAT DO YOU THINK?

What Is the Future of Package Bee Industry?

The future is bright for the package bees. Package bees will be in greater demand than ever and used more and more. The package may or may not equal an overwintered colony but adding packages to divides or adding bees to packages will soon develop them into strong colonies.

However I do not think that the killing of colonies to replace with packages is a practice to be followed generally. It depends of course largely on when the honeyflow comes.

Whether or not the package is equal to the nucleus will I believe result in considerable competition in an effort to determine the issue in the next few years. Nuclei with queens are now carried through winter in air-conditioned rooms with great success. These nuclei may be built up readily in the spring and do well.

I also think that it will be found that sulfa will be used as a food for bees with great development of the colony. The same is true of the use of pollen and pollen substitutes.

We look forward with hope for a great development in resistant bees and I certainly want to praise highly the scientists who are proceeding along this line.

J. H. Sturdevant, Nebraska.

— V —

The package bee business will stay with us for a long time. It is the ideal way to start in beekeeping. It is the ideal way for replacing losses, particularly in the North and in Canada. Although the package may never equal the overwintered colony under usual conditions they are very valuable as a means of keeping up the apiary.

J. J. Vargo, Illinois.

— V —

There are those special areas where winters are so severe it is cheapest to dispose of bees in the fall and rely on packages for replacement. Sections in the far North, where summer days are long and the flowers abundant, the question of wintering is automatically disposed of in favor of packages.

Those living in more temperate sections must consider comparative cost. In old Ontario the importation of packages with the idea of producing a crop the current year is a gamble with the odds against the package. There is so little time even under the best conditions before the clover flow, that all too often the bees build up on the flow instead of before

it and so we only have another colony to winter which represents a costly outlay.

So with us, if we could get dependable queens early in the season, increase could be made at little cost from our extra strong colonies so often found at apple-blossom time which can spare brood and bees and will have the entire summer to grow into strong colonies and store their own winter food.

How can we produce a crop from the increase? The answer lies in overwintering nuclei which is quite practical and logical. Nuclei can be made by the middle of the summer and successfully wintered, two in the ordinary hive with a tight fitting division board in the center and two separate entrances; nuclei strong enough to fill five combs of natural stores of pollen with young prolific queens, and when wintered they are far superior to packages the next spring and their only cost is the work of the beekeeper and the small value of the honey they use in winter.

Russell L. Wilby, Ontario.

— V —

Package bees and the overwintered colonies both have a place in the economics of beekeeping. Where winter is uncertain and difficult the package bee cuts cost to advantage, although it is probably not a good thing to kill off the "ace" colonies and run the risk of securing their equals. I have never felt disposed to kill bees anyway, more especially the good ones.

In many parts of the country and under certain conditions the package cannot equal the overwintered colony. It does make quick increase and does serve admirably for strengthening weak colonies. It has an important place in beekeeping.

W. P. Kinard, Mississippi.

— V —

In this part of Illinois a few packages have been bought for increase and winter loss or for starting out a beginner, nevertheless for the most part the colonies are divided for increase and for losses. On the other hand if the question were about queens it would be a different story, particularly if we should have future honeyflows and not the failures of the past few years.

Alfred P. Johnson, Illinois.

— V —

The package business will be exceptionally good as long as honey is in demand and the price is high. My own increase has been almost entirely

from packages, although I have not harvested much in surplus the first season, with the exception of last year. The packages, however, have produced enough for winter and for spring and they do make a fine working colony the second season.

Last year the packages showed a profit due to a late season when clover did not begin to yield until about July 1, then followed by a long flow from alfalfa into September. With the shortage of sweet clover the last few years, the honey crop was practically over after alsike and alfalfa were cut.

Now with the growing idea of feeding pollen supplements and substitutes and bees increasing rapidly in early spring it may be that all we will need to make increase is a good queen and a division of strong colonies. The honeyflow here begins about June 10th and it is difficult to get packages in storing strength equal to wintered over colonies by that time.

In the fall when a colony is not up to par it is useless, and a waste of honey, to harbor the colony through winter. It also seems useless to unite it to another colony. It would be more profitable to kill the colony and replace it with a package in the spring.

About twenty years ago I used 2 or 3 frame nuclei in the spring for increase and had powerful colonies for the honeyflow. However there is more of a chance of spreading foul-brood when making increase and I have not used it since. Probably with good resistant stock, together with the use of sulfathiazole, as proposed by the Missouri Experiment Station, the nuclei may again become popular.

Frank F. Johnson, Wisconsin.

— V —

WEED BURNERS

The 75% war production of "99" weed burners of the Aeroil Products Company of New Jersey has now turned back to civilian requirements. Now farmers, beekeepers and others may get this handy tool to kill weed roots. It is not only useful to the beekeeper for that purpose but also for cleaning equipment.

— V —

GREAT BEND EXILES BEES

Great Bend, Kansas has exiled bees from city limits. One councilman, A. B. Clark, objects. He wants to know how the bees are to know about city statutes when they come into the city limits, since bees can travel from three to five miles. Then too bees have value for gardens and fruit.

Now, Great Bend, how are you going to answer that question?

Prof. M. G. Cox, Kansas.

WHO'S IT?

WHETHER this is, the picture evidently comes from those days when it was considered elegant and egotistically profitable to have the kids in a parade of some sort, either on a stage, in Sunday school or somewhere so fond parents could get a vicarious thrill from the display of their offspring. So this poor fellow was dressed in Lord Fauntleroy costume, curled hair, frilled blouse and be-ribboned tennis racket to dance the light fantastic.

That's going a long way without saying much. Today he is more often to be found in a suit of khaki with hands covered with wax and propolis and with sweaty face, in a bee yard. (Even though some of his friends say the sweat does not show under his arm pits and present it as evidence that he hasn't worked very hard. Bosh!)

We can go too far with this you know. He tries to tell others something about what he thinks he finds out. Perhaps this streak of egotism goes back to the tennis racket days. Who knows?

Well now that will do. Who is he? Try to fit this into a picture of someone who seems to be prominent enough to warrant a place on this page. Send in your answer by the 15th.

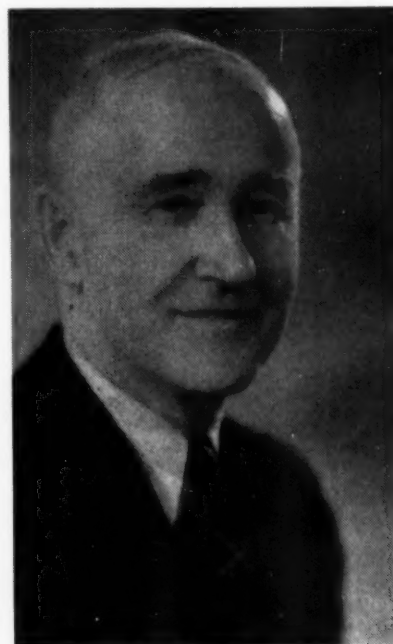
Last Month—L. T. Floyd, Manitoba

L. T. Floyd almost grew up with bees and is still a beekeeper with considerable investment in bees and equipment. As Provincial Apiarist he has served Manitoba long and faithfully as inspector, educator, counselor and friend, so it may almost be said that beekeeping in the Province is L. T. Floyd. His son, C. D. Floyd, is now under Dr. Aamodt as acting head of inspection in Minnesota.

V. O. Lee, Charleston, Arkansas, pays a doubtful tribute when he says "I think this is one of our Canadian friends. I recall not many years ago a very notorious fellow by the name of Pretty Boy Floyd. This one is L. T. Floyd of Manitoba. One was a bank robber and the other a bee robber. There is a difference." Roy Mullin, of Myrtle, Manitoba, calls him our "genial Provincial Apiarist. In that picture he looks as if he must have been a gay, young blade in those days." According to William Preston Kinard, Jr., of Louisville, Mississippi, "Floyd has shaved off his moustache since the gay nineties and changed his tie too, Huh?" Eldon Martin, of Goodland, Missouri, names Floyd and says "I have to keep up with V. O. Lee, of Arkansas. He is one up on me. It seems as though he and I are



steady customers. I think I have twelve correct guesses and he has about the same. This is quite a game." Emma Schmidt, president of the Minnesota Association, Kellogg, Minnesota, says that "Floyd is almost as well known in Minnesota as in Canada and his son, C. D. Floyd, is Assistant State Apiarist and is incidentally my employer." E. D. Craig, of Kentville, Nova Scotia, Experimental Station, knew him at once as "an old friend



L. T. Floyd today

but when I knew him twenty years ago he held the same position he now has in the province of New Brunswick."

Runner up with Floyd was Morley Pettit, of Tifton, Georgia. In another place we are saddened to announce that Mr. Pettit died of heart failure just a short time ago. Others for the honor of last month's unknown were R. M. Pugh, of Fort Qu'Appelle, Saskatchewan from W. P. Kinard, Sr., of Louisville, Mississippi; A. W. Finlay, of British Columbia, from Mrs. W. P. Kinard; and last and by all means the oddest guess from Joseph Garre, of Aniwa, Wisconsin, who nominates the famous botanist Prof. Gaston Bonnier.

— V —

IOWA STATE APIARIST REPORT FOR 1944

The report of F. B. Paddock, State Apiarist for Iowa for 1944 is out. It is a hundred page report. First half is devoted to report of the activities, both of the apiarist, the college authorities, beekeepers association and collaborating individuals and agencies. This includes the results of demonstrations on honey plant test plots, resistant stock which is aided by an association test apiary, colony management, practical bee management, pollination. Included are methods of demonstration, general education policy and aid for 4-H Clubs.

Inspection in Iowa covered 26,000 colonies during 1944, the percentage being 5% disease, practically all of which was burned.

Extremely informative articles occupy the balance of the report. Pellett has a long description of his honey plants in his test garden and Dunham on Honey Plant Committee plans.

Dr. Phillips makes suggestions on post-war and H. M. Bain on cooperation among beekeepers. The article by Harold J. Clay covers war-time regulations.

Significant articles on disease are by C. J. Nelson on bacteriology, Phillips on dysentery and on the review of the disease of adult bees to which specific attention should be called.

Dr. Johnson reports on honey plants in Iowa, Bessonnet on production of quality bees.

There are shorter articles by Howard Shipton and Earl Robinson and Munro's report on investigation on sweet clover weevil.

We assume that copies of the report may be obtained by writing to F. B. Paddock, State Apiarist at Ames, Iowa.

IMPORTANCE OF FORESIGHT

By JOHN DE BURGH LEAKE

THE faculty of being able to look ahead counts for much in success. When engaged in honey production, this quality is of more than usual importance because though bees, compared with other stock, require little attention, that little attention must be given at the right moment. It would be hard to assess the amount of honey lost each year through lack of storage space, from the number of swarms that decamp or hastily are housed in unsuitable homes because there are no spare hives at hand, and the number of colonies that swarm simply because they have not been provided with a second or with a larger brood chamber.

Strictly speaking, such activities as the assembly of equipment should be over and done with long ago, but to tardy beekeepers I would point out the fact that there is time for them to set their house in order yet.

In every apiary there is some old, or perhaps not so old, equipment that would be better for a little renovation. Have any of your supers worked loose at the ends? Nail them tight. Did you last fall throw aside a miscellaneous heap of combs, frames and sections? If so, proceed to resort and fix them up.

Combs which contain a liberal proportion of worker cells and are not too old, warped or infested with moth, should be kept for use later on in the season. All scraps of wax should be collected and rendered, either in a solar extractor when we have sufficient sunshine, or otherwise.

If you use a stove, due regard should be paid to the inflammable character of beeswax, and to the perhaps equally inflammable character of the housekeeper responsible for the care of the fire and cooking utensils. In the hands of a novice, honey and beeswax are likely to try the patience of a house proud woman.

Few of the Irish beekeepers for whom I am accustomed to write seem to bother to collect beeswax, and I have a dark suspicion that some Americans are not faultless in this respect. While it is true that it takes considerable comb to make a pound of wax, it is equally true that there is always a ready market for the product. Even a couple of dollars count now and is worth while.

Combs which have been mildewed should be brushed with methylated or other alcoholic spirit and left in the open to dry, but not in the sun. This spirit is also useful for removing propolis from excluders and other apparatus.

The smoker is often neglected, and so, for that matter, is the carbolic cloth. What is more aggravating than to find the smoker clogged or the cloth retaining little odor of phenol when you are ready to use them.

It is a good plan to blacklead the junction of the nozzle and fuel chamber of the smoker. If left in a damp place over winter, the metal portions of the smoker are apt to rust and become so tightly fixed that a sudden need for rapid separation gives rise to loss of time and temper. Remember the veil too may require mending. I do not need to mention the result of wearing a veil that has not been mended.

It is advisable to paint or creosote any hives not occupied by bees. Paint does add a touch of color and an air of prosperity while nothing is so depressing or produces such a bad effect on visitors or customers, as hives that are badly in need of paint.

A list of the season's requirements should be made out and sent to be filled as early as possible. By ordering in good time, the beekeeper insures prompt attention which even the most efficient supply dealer cannot always guarantee in the busy season.

Early spring is the time for formulating a plan for the season. Will the apiary be worked for honey or increase, or a combination? Will you want section honey or extracted honey? Will you raise your own queens or buy them? Will you require packages? How many? Will you stick to one brood chamber or the storage chamber? Will you introduce new blood and experiment with new races?

To summarize, the laggard and the lazy are not likely to make successful honey producers. An apiary can prosper on a time allowance of two hours per colony per year but those two hours must be well and truly chosen. Procrastination is the thief of time and time means honey, and honey means money.

Ireland.

— V —

NEW INSTITUTE PUBLICATIONS

"Honey to Start the Day Right," a beautifully printed folder in green and yellow, with recipes for biscuits, muffins, toast, breakfast delight, baked apples, and other desirable recipes for use at the breakfast time.

Sample copies obtainable from the

American Honey Institute, Madison 3, Wisconsin, 80c per hundred.

The second is a revision of "Old Favorite Honey Recipes," the standard and American Medical Association accepted publication, with nutritional statements which have received their approval. Beekeepers are familiar with this splendid recipe booklet of over 50 pages. For information write to American Honey Institute.

— V —

RECONVERSION

The end of the war finds many industries well on the road to reconversion. The War Production Board is revoking many controls to permit reconversion to take place as quickly as possible. However, most orders affecting the beekeeping industry will remain in effect.

Limitation Order, L-257-c, restricting the production of farm machinery and equipment has been revoked but it will be some time before manufacturers will be able to increase their production to any extent. This is partly due to a shortage of labor and partly due to shortages of materials. Beehive lumber still remains critical and under control of WPB. Galvanized sheet metal also is very difficult to obtain. It is very doubtful if manufacturers of wood and metal equipment will be able to fully meet the demand for these items in 1946.

Limitations on closures for glass containers have been lifted but controls still remain in effect on tin plate and tin containers. Glass containers are very difficult to obtain from manufacturers. While the glass industry may be able to supply more honey jars by next year, it is likely that tin and tin plate will remain scarce for a year or two.

Restriction on paper and printing have been lifted making it possible for bee journals to increase their size as well as the number of copies published and to again publish books on beekeeping without restriction. The tire allotment plan governing the production of truck tires has been revoked and the production of trucks is on the increase. Beekeepers should be able to obtain both in the near future.

Under a new WPB regulation called Field Program Instruction No. 1-WFA-7, Supplement 5, dated July 13, 1945 it became the WPB policy to issue preference ratings on all applications for equipment for the maintenance and expansion and/or modernization of processing and packing operations in the honey and beeswax field. Construction up to \$25,000 does not require WPB approval, so beekeepers and most packers will be able to modernize or expand their facilities as soon as labor, lumber and other materials are available.

VICIOUS BEES

By DR. W. E. MOORE EDE

ALL of us from time to time come across colonies, the bees of which are real warriors—bees which on the slightest interference become unmanageable and remain a danger to passers by for two or three days afterwards. Many of these colonies seem to be our best gatherers. It has been suggested that this type of colony had little or no manipulation of their brood-nest owing to its owner's fear of them, and the more they were left to nature the better they did, and that most colonies were over manipulated. May it not be that the extra viciousness is part and parcel of a greater virility—active in stings, active in work—more on their toes than the ordinary colony. That extra vim means more nectar gathered.

If an anaesthetic is used, these warriors or the bees in any colony can be handled like flies, and with no ill effect on the colony. They return to normal in a few minutes—seem to have forgotten that they have been interfered with, and therefore they are no more of a nuisance to passers by than before the manipulation. The use of anaesthetic does not induce robbing. I have used this method all this last season on any stock which showed signs of being difficult with invariable success—such colonies, for instance, as those from which the bees flew to the attack the moment the corner of the quilt was peeled back. An old and excellent beekeeper of forty years standing recently asked me to help him find the queen in a colony of most vicious bees. We found the queen in a few minutes with a sting. This colony gave more honey than any colony I have heard of in this area this disastrous season.

I used chloroform to introduce queens some years ago, but a brother has perfected the use of anaesthesia to subdue colonies which needed to be examined. We both of us have been beekeepers for over forty years. This is to indicate that we are not inexperienced or new beekeepers with cranks.

My brother has used an anaesthetic as a routine in practically every colony he has examined this season—and in the swarming season they were examined every 7-10 days. There has been no evidence of any ill-effect on the bees or on the amount of the surplus procured during this very deplorable season.

The dose recommended is as follows:

Methylated Spirit.....1 part
Methylated Chloroform...2 parts
Methylated Ether.....2 parts

These drugs can be kept in separate

bottles and mixed as needed, but the mixture will keep for a considerable time. An anaesthetist's drop bottle makes it easy to apply. A chemist will procure one if requested. A board or a square of cellotex the size of the top of the hive should be available, also a square of cloth or heavy duster is needed with more body than calico.

To anaesthetise, rip off the quilt and immediately cover the exposed frames with the anaesthetic cloth. Start pouring the anaesthetic on to the cloth in a little stream up and down, starting at one side and working over to the other side, but following up and covering the cloth with the board so that the mixture does not evaporate upwards. As it is applied there will be an immediate roar, but in two or three minutes the hum of the bees will become much subdued. The time for the drug to have the desired effect depends on the quantity given, and the air temperature. Probably the amount needed will be about a dessert-spoon full. Test progress by pulling back the cloth from the side first sprayed, exposing one or two combs. If the bees are active or fly out, cover again—wait and if necessary give a little more dope.

When supers have to be removed to get to the brood nest, the bees in them must first be subdued, and after the supers are lifted off, the cloth may

need to be put on to the brood chamber for a further short time and an extra dose be given.

It is not necessary or desirable to make the bees unconscious so as to fall on to the bottom though it drives them to the bottom of the combs. When the bees are found to be slowly moving about the comb they are in the desired condition. The queen is easily found.

One soon learns the dose necessary. There is not the slightest danger of anaesthetising the beekeeper—nor can anyone accuse the beekeeper of murdering his enemies with it. Only in novels is it done. I have never been able to anaesthetise a sleeping baby without it waking up and having to be forcibly held—though I have tried many times to do so when an operation has been necessary so as to avoid forcible administration to a child who cannot understand what is being done.

All beekeepers of standing have from time to time to tackle colonies which violently resent interference, but I am sure no beekeeper approaches such a colony with pleasure, nor do they manipulate them as unhurriedly as they instruct beginners it should be done.

By this method any colony can be handled easily, nor is there any need to destroy the queens of our best producing colonies because of the viciousness of their progeny.

England.



PELLETT CLOVER

This picture will give an idea of the mass of bloom on the new clover. The bees are on the flowers constantly when the weather permits and we hope for good pollination. It is also planned that every official experiment

station in the country have roots of the clover, if they become interested. In Iowa, the experiment station plans to propagate the clover as fast as possible. At present there is no stock for the honey producer but, with such a program, enough may become available for everyone.

WORKERS MATING

By A. L. GREGG, M. D., M. Ch.

Chairman, British Bee-Keepers' Association.

IN your March issue (1) Mr. E. C. Bessonnet calls attention to the work of Dr. Otto Mackensen proving that queens can be reared from a proportion of the eggs found in queenless colonies having laying workers. He is at loss to explain the phenomenon being apparently unaware that coupling between drones and workers has been recorded in a manner which puts the occurrence beyond doubt.

The subject has intrigued me for some years and your readers might be interested in a precis of the paper I gave at the International Conference of beekeepers in Switzerland in 1939. (1a).

The paper offered an explanation for the queens which were sometimes reared in colonies without queen or other brood. (2, 3, 4.) It opened with five premises which would be agreed:

1. Most long queenless colonies

have, or have had, an impulse to rear a queen.

2. Such colonies have potential laying workers.

3. Drones, if present, will be well nurtured and potent.

4. Even rare phenomena in bee life must occur more frequently than detected.

5. All potential laying workers have, at least partially developed, the instinctive impulses of a queen.

The six possibilities whereby such a colony might obtain an egg from which a queen could be reared are:

1. A mated queen may visit the destitute colony and lay just one egg! This explanation is rejected as absurd.

2. An egg from the original queen may have remained unhatched. Scrutiny of the record shows that this is not always a possibility.

3. An egg laid by a worker may be fertilized after being laid.

This idea rests upon the slender foundation that one experimenter (6) did this by hand though no one else has succeeded in doing so. It would demand a set of circumstances "sufficiently fortuitous . . . to warrant rejection of this explanation."

4. A queen may be derived from an unfertilized egg.

This was suggested by Professor Armbruster (7) on the analogy that it occurs with the wild bee *Halictus malachurus*. Without further evidence we are not justified in applying to the honey bee this modification of parthogenesis.

5. A bee may bring back a fertilized egg from another colony. (8, 9, 10).

This commonly accepted explanation I submit goes against reason; any instinct governing such action being neither natural nor heritable, and its absurdity has been well brought out in the literature. (10, 11, 12).

6. An egg may be fertilized in the oviduct of a worker bee.

The facts demand that we do not set aside this explanation as impossible; it is, indeed, probable. The argument runs thus:

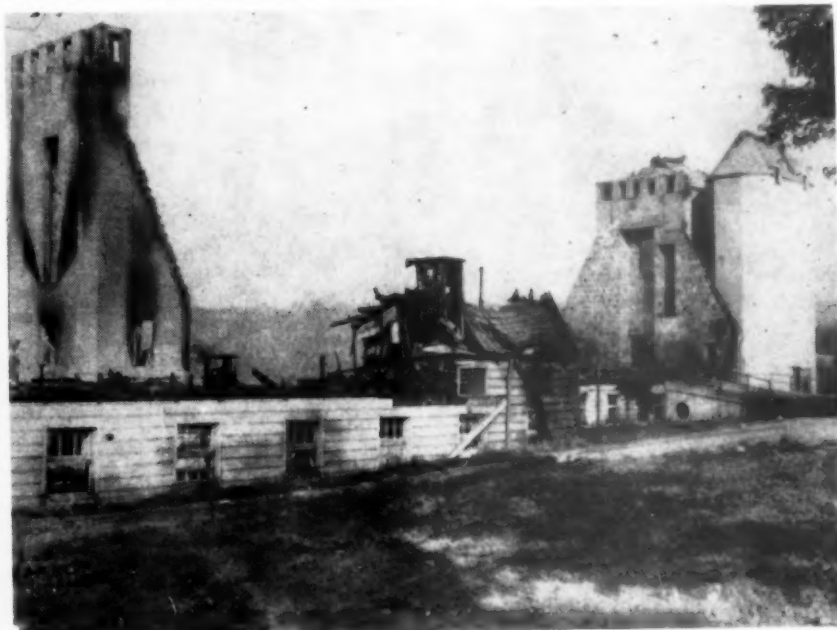
- a. In the African honey bee, *Apis unicolor*, it is well recognized that laying workers produce females. (13, 14, 15, 16, 17).

- b. The last of the unsealed brood in a queenless colony would be likely to receive an extra supply of food, there being no competition for nursing attention.

- c. It has been shown (18) that workers supplied with unduly large amounts of food during their larval stage not only have enlarged ovaries but actually develop spermatheca apparently functional.

- d. Should such bees be present in a queenless stock they might well develop an instinct for mating. Such mating might cause the fertilization of one or two eggs even though, for anatomical reasons, it might not be fully accomplished. Doubtless undersized drones reared in worker cells would facilitate such coupling, and in the Prussian case the drone was stated to be "of middling size."

- e. The coupling of a drone with a worker bee has incontestably (Please turn to page 363)



FIRE PREVENTION ON FARMS

Farmers will spend millions soon remodeling their homes and buildings. Intelligent planning will make the farm of the future less subject to fire damage. Proper construction would cut losses 50% says the National Fire Protection Association.

This year by proclamation of President Truman, fire prevention week will be held October 7-13. With war time restrictions on remodeling and modernization relaxed by War Production Board and a vast volume of

new construction to start, self-interest dictates that fire safety be built into homes and farm buildings.

Beekeepers know that fire is probably one of the worst causes of loss of equipment and material in their economy. There are more honey house fires probably every year than most beekeepers realize, with attendant heavy losses. We have ourselves suffered losses from this source and know how serious it can be. Proper construction will prevent a great part of it.

THE CAUSE OF PARALYSIS OF HONEYBEES

By C. E. BURNSIDE

U.S.D.A., Agr. Res. Adm., Bureau of Entomology and Plant Quarantine (1)

THE term "paralysis" is used to designate disorders of adult honeybees characterized by trembling, sprawled legs and wings, occasional partial hairlessness, and in some cases a black, shiny appearance. The death rate may be heavy in the easily recognizable cases. There are indications, however, that at times paralysis is mild or transient in character with only a few bees affected, which are easily overlooked. The term may have been applied to more than one disorder of bees, since it is not known how many types of paralysis affect bees. No pathogenic micro-organisms have been found associated with paralysis, and the cause has long remained undetermined.

Burnside (2) transmitted such a disorder by placing healthy bees in cages together with trembling black, shiny, sick ones, and also by infecting bees with a water extract or the blood of sick bees through feeding, spraying, and the use of body-puncture inoculation. He concluded that paralysis is infectious. Butler (3) repeated Burnside's experiments, with similar results, and likewise concluded that there is a form of paralysis which is infectious.

In February 1943 S. E. McGregor, of the Bee Culture Field Laboratory at that time located at Hope, Arkansas, observed a high death rate of bees among the colonies there. He submitted samples of the affected bees to the Laramie, Wyoming, laboratory for examination in February, June, and November of 1943. No disease caused by known micro-organisms was found in any of the bees, and not enough arsenic was found present to have caused their death.

The results of the first tests made at the Laramie laboratory with the February sample (see Preliminary Tests below) suggested that the disorder might be paralysis. At that time, however, McGregor did not consider the field symptoms typical of paralysis. Some of the symptoms reported in his correspondence are given below:

(1) March—In certain respects the condition is not typical of conditions in the South to which the term "paralysis" is applied. Very few black, shiny bees are present. The

palsied motion of the abdomen is rare, and all the bees' responses are slowed down. Every colony at Hope and Emmet is affected, rather than a few colonies in an apiary as is usual in paralysis. So far there is no sign of recovery.

(2) June—The paralysis that was causing heavy losses during the winter has practically disappeared. A few sick bees can still be found near the entrance of all the hives, but there are no piles of dead bees such as occurred last winter.

(3) November—Only the colony from which the sample of bees was taken had typical black, shiny, trembling bees in front of the hive, but there were more sick bees in front of this hive. The other colonies had only two or three sick bees at the hive entrances, but there were several thousand dead ones.

Preliminary Tests—In preliminary tests to determine whether the disorder was infectious, a water extract prepared from 20 bees of the February sample was mixed with the drinking water given to a cage of 147 bees. Two weeks later nearly all the bees appeared sick, and 101 of them died between the 20th and 29th day after they were given the water extract. No micro-organisms that might have caused the high death rate were detected in the bees by microscopical examination of fresh or stained material, but the symptoms were thought to resemble those of paralysis.

The experiment was repeated with two cages of about 150 bees each. Water extract of bees that had died in the first test was sprayed onto the bees in one cage and mixed with sugar sirup given to the bees in the other cage. After 10 days most of the bees in both cages appeared sick and all but 2 of the sprayed bees and about half of those exposed by feeding the water extract died within three weeks. Again the symptoms resembled those of paralysis, and again no infectious micro-organisms were detected by microscopical examination.

Additional experiments were then conducted to determine whether the infectious agent is a filtrable virus.

(2) Burnside, C. E.—Preliminary observations on "paralysis" of honeybees. *Jour. Econ. Ent.* 26:162-8. 1933.

(3) Butler, C. G. Bee paralysis, May sickness, etc. *Bee World* 24: 3-7.

The results obtained are reported in this paper.

Material and Methods—The basic material used in the following experiments was prepared by triturating in water in a mortar bees submitted by McGregor or affected bees from previous tests, straining through cheesecloth, and centrifuging at low speed for five minutes. Samples of affected bees submitted to the Laramie laboratory by A. W. Woodrow from the Davis, California laboratory in March 1944 and by Ira T. Burns from Catarina, Texas, in April 1944 were also used for preparing material for infecting the bees.

The clear supernatant water extract was decanted after centrifuging and usually divided into fractions of one-third and two-thirds. The smaller fraction was used without further treatment and the larger fraction passed through a Chamberlain-Pasteur F or a Coors porcelain bacteria-withholding filter one, two, or three times. No micro-organisms were detected in the filtrate by direct microscopic examination, by incubation of the filtrate at 97° F., or by transferring drops of filtrate to nutrient agar slants and incubating the tubes at 93° F. In some instances the bacteria-free filtrate was divided into equal fractions, and one fraction was heated in flowing steam at 200° F. for 30 minutes. Both the unheated and the heated filtrate were used for exposing bees to possible infection.

The bees used for cage tests were taken from colonies at Laramie that appeared to be free from disease. About 150 bees were placed in each cage. The cages were kept in the laboratory at 71° or 78° F. A colony used in the experiments was kept in a screen-covered flight cage in the laboratory. The bees were infected by spraying them with the water extract, by mixing it with their food, or by both these methods. Cages of check bees fed sugar sirup and sprayed with water were kept under similar conditions. As additional checks, healthy-appearing bees from a colony were killed, allowed to remain one or three days at room temperature, and then used for preparing a bacteria-free filtrate. Six cages of bees were exposed to possible infection by spraying them with the

filtrate and by mixing it with their food.

The death rate and symptoms of both experimental and check bees were recorded daily.

Results—Since the three methods of infecting bees usually showed no significant difference in results, these have been combined in this paper except where a difference was noted. Since the findings with material obtained from McGregor's February and June samples differed from those with material obtained from his November sample and from those submitted by Woodrow and Burns, they are reported separately.

McGregor's February and June samples.—Five cages of bees infected with unfiltered water extract of these samples developed pronounced symptoms of paralysis, affecting 25 to 100 per cent of the bees after 8 to 14 days. The death rate rose sharply after symptoms appeared and continued high for about 10 days. The average length of life was about half that of check bees.

Fifteen cages of bees infected with bacteria-free filtrate that had passed through a porcelain filter one, two, or three times showed pronounced symptoms of paralysis, affecting 25 to 100 per cent of the bees after eight to fourteen days. The death rate rose sharply after symptoms appeared and continued high for nine to fourteen days. The average length of life ranged from about one-half to three-fourths that of check bees. Extract filtered only once appeared about as virulent as extract that had not been filtered. After two or three filtrations the effect upon bees seemed somewhat reduced.

Four cages of bees sprayed with or fed extract that was filtered once and then heated did not develop noticeable symptoms of paralysis, and the death rate was about the same as among check bees.

The colony of bees in the laboratory infected with once-filtered extract that was not heated showed an increased death rate beginning two weeks later and continuing for about two weeks. The increase in bees unable to fly was more noticeable than the increase in dead bees. The symptoms appeared similar to those of sick bees in cages.

A cage of bees infected with bacteria-free filtrate prepared with sick bees from the colony showed symptoms of paralysis after a week, followed by a pronounced rise in death rate. More than 80 per cent of the bees died during a 10-day period when the death rate was highest. This test was the ninth successive passage of the infectious agent through bees.

McGregor's November Sample.—In some tests the findings with this sample were similar to those described

above, but in others the virulence appeared to be considerably less. Of the four cages of bees exposed to the unfiltered extract, in two cages symptoms of paralysis were apparent and a rise in death rate occurred after 14 days, and the average length of life was about half that of check bees. In the two other cages a rise in death rate occurred after 33 to 40 days, the symptoms were not pronounced, and the average length of life was about three-fourths that of the corresponding checks.

In two out of four cages exposed to the bacteria-free filtrate a rise in death rate, with symptoms, occurred after 30 days, while in the two other cages neither the symptoms nor a rise in death rate was pronounced. The average length of life for the four cages ranged between 55 and 90 per cent as great as that of corresponding check bees. The death rate of bees in two cages sprayed with and fed heated filtrate was slightly but not significantly higher than the death rate of corresponding check bees.

Woodrow's Sample.—One cage of bees sprayed with bacteria-free filtrate developed symptoms resembling those in previous tests. The death rate rose sharply after eight days and remained high for two weeks. The average length of life was about half that of the check bees. Of two other cages that were fed the filtrate, the bees in one cage showed symptoms and a rise in death rate after twenty days, and in the other cage after twenty-seven days, but relatively few of the bees showed abnormal symptoms at any time. The average length of life was about 60 to 80 per cent as great as that of the check bees.

Burns' Sample.—Two cages of bees sprayed with bacteria-free filtrate from this sample or fed sirup with which the filtrate was mixed appeared entirely unaffected. None of the bees showed symptoms of paralysis before they died, and the death rate was even slightly lower than that of the corresponding check bees.

Material from Unaffected Bees.—A. P. Sturtevant, of the Laramie laboratory, suggested that additional checks should be made using material prepared with bees from healthy colonies. Bees from apparently normal colonies were killed, held for one or 3 days at room temperature, and used for preparing bacteria-free filtrate. Six cages of bees were exposed to the filtrate by feeding and by spraying. None of these bees showed symptoms of paralysis before they died, and the death rate was practically the same as that of a corresponding cage of unexposed check bees. Bees in four other cages were similarly exposed to filtrate prepared with bees that died in one of these six cages, but none showed symptoms of paralysis, and the death rate was practically the

same as that of a corresponding cage of check bees.

Description of Affected Bees.—In these experiments the first symptom of disease was a slight slowing down of the activities and responses of the bees. Recently affected bees hummed feebly when disturbed or when suddenly exposed to light or smoke, but they soon became quiet again. A little later the bees became weak, trembled when disturbed, and fanned their wings feebly. Sometimes they moved forward and backward in short jerks. Still later they appeared stupefied, very weak and stiff, and were able to crawl only with difficulty. All their movements were slow and trembling. In more advanced stages the bees seemed unable to coordinate their movements. Such bees would attempt to crawl by using only the front pair of legs, or the front pair and one or both legs of the middle pair while holding on with the back legs or dragging them. (These symptoms indicate that the nervous system may be affected.) In the last stages the bees were unable to crawl at all. Their legs and wings were sprawled out, and their bodies rested on the floor of the cage, giving them a flattened appearance. The abdomens were sometimes held at an angle slightly sideways to the thorax and head. Bees sometimes remained alive in this condition from several hours to one day. At death the abdomens were usually of normal size, but some were distended. The bees did not lose their body hairs to a noticeable extent or become black and shiny, although some became darker than normal. Some bees died within a day or two after symptoms appeared; other bees lingered in a sick condition for several days or a week before they died.

The symptoms resemble in most respects those of the disorder of adults bees commonly called paralysis. When paralysis occurs in colonies during the active season, some affected bees become partially hairless, black, and shiny, and show trembling or shaking movements. These are commonly considered the most specific gross symptoms of paralysis and are frequently the only ones depended upon for diagnosis in the apiary, even though a relatively small percentage of affected bees show these symptoms. According to McGregor's unpublished reports, these symptoms were rare in affected bees at Hope.

Discussion.—The only pronounced difference between the symptoms observed in these experiments and those usually accredited to paralysis in colonies seems to be the lack of partial hairlessness in the experimental bees. Loss of hairs and the black, shiny appearance is thought to be caused by

(Please turn to page 363)

BEEKEEPING IN MEXICAN VILLAGES

By CLAUDE R. KELLOGG

IN Mexico the beekeeping industry must have begun with the coming of the Spanish Conquerors if, as is generally believed, no true honey bees existed in the American Continent prior to the advent of settlers from Europe. The Aztecs, long before the Conquest, had found the nests of the small, wild, stingless bees of the family *Meliponidae* and from them had obtained, as they still do today, honey and a type of "wax" called "wax of Campeche." This was of course hardly an organized industry and so far as we know, no serious efforts have been made to cultivate the small wild bees and domesticate them.

Of course there are in Mexico today many modern hives and some very large, up-to-date apiaries but for the present our main interest is with the system of beekeeping as carried on in the villages of the country.

It seems probable that the system now in vogue among the farmers must have been brought in, or originated by, the Spanish and taught to the people in this country. As at that time there were no modern movable-frame hives in existence, the hive introduced into Mexico would have to be a box hive.

So far as our visits go, there seem to be two definite types of hives in use in the central part of Mexico,—the wooden box-hive and basket hive. Aside from these two general types,—which are used by the more careful beekeepers, bees are also kept in all sorts of containers such as empty soap boxes, barrels, kegs, roots of the Maguey, etc. Undoubtedly much of the honey crop of Mexico,—some officials say as much as two-thirds is produced in these crude containers.

The wooden box hive.—As used around Mexico City, four boards make the main body of the hive, the top, bottom and sides being nailed tightly and immovably together. The hives are never painted, nor is any preservative used for the wood. The two end pieces are removable and held in place by bent nails or dowel pieces. At the bottom of one or both of the end pieces sawed notches allow for the flight of the bees. However, with the passage of time and the ravages of the weather, the boards shrink and warp so that in the older hives there are plenty of places for the egress of the bees. Sometimes a roof of "shakes" or thin boards is placed over the hive from one end piece to the

other to afford protection from the sun and rain, but this is not always done, or, leaves of the Maguey may be put over the hive for its protection. The hives rest on rocks, bricks, logs or on adobe walls usually about two feet above the ground.

These hives seem to be of about the same size, 30 inches in length, 9 inches in width and 11 inches in height, thus giving a capacity of some 2,970 cubic inches in contrast to the 3100 cubic inches of the Dadant Hive or of 5,069 cubic inches of two Langstroth hive bodies. With such small capacity it is easy to see why the crops of honey are surprisingly small.

The basket hives. These are cylindrical in shape, about 30 inches in length and 9½ inches in diameter, giving 2,126 cubic inches as the capacity inside. For each end there is a circular cap or cover which is removable to allow access to the hive. A few holes in one of the covers allows the bees to fly in and out. These basket hives, and often the box-hives as well, are plastered over with cow manure. They are placed horizontally on rocks, logs or any support available and covered with maguey leaves, tin or boards. This type of hive seems to be more prevalent in the central part of the Valley of Mexico, in the State of Guanajuato, than in the environs of Mexico City.

In neither type of hive do they use frames and the bees place their combs as they wish.

Other containers. One often sees colonies in empty soap boxes or in hollow roots of the Maguey. The latter make good shelters as they are water proof. The ends of the roots are partially covered with leaves of the Maguey or matting, but as they do not fit tightly, there is plenty of room for the bees to fly in and out, and, also, unfortunately, room for the ingress of robbers in times of dearth.

In none of the above types of hives is it possible to control swarming and the bees are allowed to swarm at will. Practically every big bee yard is provided with a bell and it is lustily wrung in an effort to entice emerging swarms to settle.

Gathering the crop. For gathering the honey crop the implements used in the villages are very simple. A gunny sack over the head often serves for a veil and an earthen pot, filled with smoking corn cobs serve as a smoker. One such smoker, more elaborate than



Earthen jar smoker, with door to feed in corn cobs, holes at the top for smoke. Grate does not show.



Straw hives, covered with matting, in central Mexico. In back, hives for frames of odd size.



Soap box hive, with a tin roof.

others we have seen, was an inverted earthen pitcher with a grate and with holes in the top for the smoke to emerge. A door in the side made it possible to feed in the corn cobs.

The ripe combs are cut out with a long knife, taking the honey from one end of the hive one year and from the other end the next year, thus alternating the position of the brood-nest in the hive.

Extracting the honey. Without the use of movable frames it is of course impossible to use extractors for getting out the honey. The combs of honey are squeezed out in the hands, the liquid honey running into a large earthen vessel. No heat is applied to the honey. Squeezing together the honey and wax in



Basket for straining honey.



Basket hive, just brought to have bees transferred to horizontal hive. Compare the sizes.



A box hive under a straw roof.

the hands undoubtedly darkens the product and, besides, is extremely hard work so that a simpler method should be found. The solar wax extractor, in regions where there is ample sun light, should solve the problem.

Size of the crop. The amount of of honey produced per colony in one year is extremely limited. From reports from farmers with whom we have talked, it seems that an average of 15 pounds per year would be a fair figure. In many particular instances they have reported one, to three or four liters (a liter is 0.264 of a gallon) per colony. Undoubtedly in warmer regions and in very good locations larger returns are received, but these figures seem to be about

right for the region about Mexico City.

In this region, it is often possible to get a crop of honey from spring plants, fruit trees, etc., but the main crop comes from fall flowers. During August, September and into October until the frosts kill them, flowers abound in the corn fields and along the road-sides, not only giving surplus honey but making the countryside one unending flower garden at that time of the year. In many places solid patches of wild flowers cover acres and acres of ground, the solid blue of wild cosmos, the solid yellow of the wild mustard or the solid white of the wild radish presenting a most fascinating view from train or bus. And when the modern system of beekeeping becomes better established in Mexico, many tons of honey now wasted will be reclaimed.

—V—

JARS FOR "CHUNK HONEY"

The Federation has recently made appeal to the Container Division of the War Production Board for the release of wide-mouth jars for the packaging of **bulk comb honey** which in our terminology becomes **chunk honey** when its chunks are placed in jars which are then completely filled with liquid honey.

While at this writing we have not been informed directly, we are advised through friendly sources that wide-mouth jars are now being made available upon reappeal to the War Production Board. To secure action in individual cases reappeal should be addressed to Mr. Louis Piatt, Administration L-103b Container Division, War Production Board, Washington 25, D. C. and should contain all or more than the details given in individual appeals.

Your Federation is now asking for a blanket appeal for the release of wide-mouth jars for all packers of **chunk honey**, but this may not result in action in time to relieve the packaging situation this season, so interested packers should make their appeals to cover their individual situations.

Terms Confusing

Please note that we are labeling this product as "chunk honey," the term by which we have always known it. Only recently in our conversation with Mr. Clay during our visit in Washington, we were advised that in certain portions of the country our "chunk honey" is commonly called "bulk comb honey." No doubt there is confusion and regardless of established usage it is about time we get the meanings and terms straightened out among producers. If there is confusion and misunderstanding among producers, how can we expect un-

informed officials of WPB, as well as beginners in our own industry, to know to what we are referring.

In the first place "bulk comb honey" is somewhat confusing. We can easily imagine how one who has never seen any comb honey except "section comb honey" (even an official), might think of "bulk comb honey" as "section comb honey" in bulk and therefore there would be no reason for using wide mouth jars for marketing same. Our letter to WPB attempted to clear this question. Now the writer has no substitute term to suggest for "bulk comb honey." Perhaps there is a less confusing one.

We object to the use of "bulk comb honey" for chunk honey. In our minds, "bulk comb honey" is the comb honey produced in frames of various sizes other than in sections. "Bulk comb honey" may be sold directly to packers or even consumers as such, or it may be used for producing "cut comb honey" (honey-hunks, etc.) or the cut pieces may be inserted in wide-mouth containers (preferably) which when filled with liquid honey is then neither "bulk-comb honey" nor "extracted honey" but is a combination of both, which for all rhyme or reason, certainly is not entitled to the name of one of the former. We are willing to accept and adopt "chunk honey" as the combination name but not "bulk comb honey." Perhaps there is a better name or shall we continue to use these terms, applying them in their true meaning to the particular product to which their name is applicable? What say you?

—V—

SUGAR SITUATION

Of news and importance to the beekeeping industry is the report that most large consumers of sugar appear to be agreed that there will be no free supply of sugar until 1947. Confectioners still are restricted to 50 per cent of their 1941 consumption of sugar and do not look for any easing in their quotas until the first quarter of 1946. Further, it is stated that if the war had continued they would have had to take a lower quota.

The continued shortage of sugar probably will have two effects on the beekeeping industry. (1) It is likely that more sugar for feeding bees will not be available until next year and beekeepers should be advised to leave sufficient stores of honey with their bees. In other words, the present regulations permitting sugar for feeding bees are not likely to be changed for some time. (2) The outlook for a continued good demand for honey is very favorable for next year at least. It is expected that WFO-47 controlling the industrial use of honey will continue in effect for some time to come.

WHY HONEY IS NOT A STAPLE IN EVERY HOME

By JOSEPHINE DI LULLO

ONE school of metaphysicians combat ignorance and foolishness as the arch enemies of mankind. And who shall say they are wrong? Certainly they are the chief drawbacks in the honey industry and are expressed to quite an extent in the folly of the processor and the ignorance of the buyer.

Until it is fully understood that honey is only a generic term and that there are just as many kinds of honey as there are brands of any well known commodity and that all which comes from a bee hive is not good and attractive food there will be dissatisfaction to limit sales.

The proponents of honey publish leaflets urging the use of honey in cooking and within its limits it is highly desirable, especially if the honey is of the right sort. A light, delicately flavored honey may be used most advantageously in many kinds of cooking but not in all. Fruit cakes, many cookies, mince meat, ginger breads and many kinds of pies, preserves and jams are definitely better when honey is used instead of sugar.

However enthusiasts go too far and tell you that white fluffy cakes may be made with honey instead of sugar. I have had too many birthdays flatly to dispute many things. Nevertheless I have been hunting for thirty years for a workable recipe for this sort of cake. The cooks who make the claims either refuse to give their recipes or fail to do so or maybe they add a few spoonfuls of honey to a standard recipe and it becomes a question whether the honey is any real addition.

The right kind of honey may be used most successfully in ice cream and sherbets. I know one man who feels that ice cream is not worth eating unless he can pour honey over it. The sad truth is that some of the honey that he might get on the market would spoil any kind of food.

My neighbor, for instance, has just come in with a two pound jar of honey bearing the label of a prominent packer. She paid 63 cents for it. The stuff is a good rich mahogany color and the flavor is noxious. A combination of bitterness, fermentation and rancidity. Probably she has bought her last jar of honey. At least she has done so until time has softened her resentment.

Under present conditions, when the wiseheimers in the O.P.A. decree that

honey is honey and that dreg and capping melter honey are worth the same money that first class honey receives, anything goes. But it is a question whether, in the long run, this is not detrimental to the industry.

Honey on the grocer's shelves is almost all blended, along the line of the old story of Betty Better's who bought a bit of bitter butter then bought a bit of better butter to make the bitter butter better, and there is room for doubt as to whether the better butter was not wasted.

A great many people claim an allergy for honey. One such person came to our home often and proclaimed that she was unable to eat anything with even a trace of honey in it. Nevertheless she never got tired of boasting of my mince and pumpkin pies in which I always use honey. One man assured me that honey was simply deadly to him until he learned to sprinkle his hot cakes and honey liberally with black pepper.

My private belief is that a lot of that allergy talk is hooey. There is a wide spread belief that all honey on the market is adulterated. Some years ago a man came to our house to buy some "absolutely pure bee's honey." He said that he had been informed that not a pound of pure honey could be found in any grocery store, it was all mostly low grade sugar. I asked him how he figured we could afford to buy 6 cent sugar (in the days of low priced honey) to make 4 cent honey. Disgustedly he turned away saying "Well my daddy always told me there is no use arguing with a woman."

All producers are not careful to have their tanks and extractors clean and to remove all foreign material from the honey, people who are just naturally careless and dirty in whatever they do. In honey production care must be taken, wisdom shown in processing, and the public given a clearer understanding of what honey really is and what its properties, possibilities and desirabilities are.

— V —

WINTERING EXTRA QUEENS

R. Selwyn Wilson, September, page 320, raises the question about wintering extra queens to use in early spring when they are not easily obtained elsewhere. We have tried various methods but so far have failed to find any satisfactory. Perhaps we are waiting for the impossible.

Alfred P. Johnson, Illinois.

BEESWAX AT WAR

By Wilbur L. du Bois

DURING the war beeswax has been a critical material and consequently at a high premium. Beekeepers have been urged to save every little scrap and have responded patriotically. Just what the Army wanted the wax for was surrounded with mystery because its applications were carefully guarded military secrets. Some still are.

Now that the war is over, however, we know how a lot of this wax was used. The importance of our industry in supplying material for prosecuting the war stands out very clearly. From a list of over four score military uses of beeswax we have selected a few which illustrate the vital role played in the war by this by-product of the hive.

A special impregnated adhesive tape took hundreds of thousands of pounds of beeswax. This tape is used to seal containers holding large shells and as a wrapping around the shells themselves to protect them against rust and damage in transit. A further application in the manufacture of munitions is the use of beeswax to delay the explosion of armour-piercing shells.

The torrid tropical sun under which much of this war has been fought has introduced serious lubricating problems. At these extreme temperatures ordinary grease melts and runs off the surface which must be protected from rust. Beeswax solved the problem. Used in lubricants for guns and as a waterproofing and protective coating for machinery shipped into these battle areas, it has been effective in keeping combat equipment in fighting condition. It is also used in bombsticks but just how is still a military secret.

If you have had the privilege of examining an Army bomber at close range you have observed the smooth, polished surface of the wings. Beeswax again. Inside the bomber you have been amazed at the intricate network of electric cables. Beeswax is an essential constituent of the coating which protects these wires from mechanical and high temperature injury. The same is true of the hundreds of miles of electric cables strung around a combat area for communications and transmission of powder. Also, in planning these bombers the manufacturer frequently prefers beeswax for making molds of new engines and other equipment.

In the camouflage cream used so extensively in the early phases of the war beeswax was an important ingredient. Ski-troops speed over the snow more swiftly because their skis are polished with a product containing beeswax and in the manufacture of



Over the mountain at Klamath Marsh, 4500 feet above sea level. Crater Lake mountains and Diamond Peak in background.



Honey house in center. Roxy Ann mountain in background.



Field of Melana sweet clover. Roxy Ann mountain in back.



Alsike in full bloom at Klamath Marsh.

AN OREGON OUTFIT

This honey house with garage, 24 x24 feet, was built with separate rooms for extracting, tanks, etc. with storage room for supers and honey

cans. I have often moved my bees over the mountains one hundred miles distant to alsike where it was raised for seed. The elevation was 4,500 feet with frost every month in the year. At home we often get a late flow from ladino clover, alfalfa and

sweet clover. One of the pictures shows Melana sweet clover from Saskatoon planted the first week in May and in bloom since the middle of July.

Xavier Widmer,
Oregon.

many important medicines for both Army and Navy beeswax is a valuable element.

The Army has spent a vast amount of effort and money in developing rations for all combat conditions. These foods must be protected from spoilage by moistures and insects. A coating of which beeswax is a constituent was devised for impregnating and sealing the packages. These can be stored with safety in damp places or even floated ashore in amphibious operations without damage to their contents.

Some other military products in which beeswax is used are: coating on carbon and typewriter papers; ointment to sooth gas burns; impregnating material in the manufacture of gas masks; boot and shoe preservative and coating on shoe laces; gaskets and airplane engines; sailmakers' wax to preserve the thread and prevent kinking while sewing;

foundry waxes; blackout composition for windows and products used in chemical warfare.

These uses of beeswax with other war applications have taken millions of pounds of wax. This has involved curtailment of many normal demands which now will be revived. Beeswax will continue to be used in new products developed during the war which will now find peacetime application. It is highly probable that beeswax will command a fancy price for some time to come.

— V —

AVOID POISON IVY

An interesting article in August American Fruit Growers tells of ways to destroy poison ivy and protect against it. Not only is the ivy bad in orchards, it is equally bad in bee yards. There is little need to describe poison ivy or poison oak to the beekeeper. They are both too familiar.

People vary in their susceptibility to ivy and oak poisoning. Where they are prevalent it is always well to wear high shoes or boots and work in gloves and when exposed take a bath after the day with strong soap to help prevent the development of rash. Copperas, if not used in excessive doses, when rubbed on ivy rash will soon dry it up.

In killing poison ivy a spray solution of $\frac{3}{4}$ to 1 pound ammonium sulfamate weed killer per gallon will treat about a thousand square feet of ivy ground. A new killer under the name of Weedone provides low cost control not only for ivy but for weeds. The best time for application of weed killer sprays seems to be when the plant has developed maximum foliage and is at the height of its growing period.

Many of the new chemical weed killers can be applied with a small hand type air spray in the bee yard.

The Answer

By What Standard Do You Judge a Queen?

So far my experience has led me to believe there are no external characteristics by which one can pick good queens. Let any beekeeper put his predictions about the quality of his queens in writing as they are first observed, whether he produces his own queens or whether he buys them. File these predictions so he can check himself and not trust to memory and he will soon find he has as many misses as hits in his predictions.

The only sure way to judge a queen is by her egg laying and brood pattern.

Every beekeeper often has apparently fine queens failing to build up their colonies and every beekeeper has kept apparently inferior, undersized queens that keep colonies strong two or three years.

In judging young queens give them a chance to fill three or four combs with brood and inspect the filled areas. Some queens will never fill an area as big as your two hands. Others will fill almost the entire comb and keep it that way.

It takes population to get honey. Those queens which fill combs soon have the population to care for their brood and to gather the crop. They may fill a hive to swarming but if each colony is given sufficient room it will store the honey.

Of course larvae should be well fed and the queen when laying should be large and of good shape but these qualities alone do not justify her as the head of a colony if she fails in the job of populating it.

C. S. Walker, Colorado.

— V —

How Do You Find the Queen?

I put a drop of ordinary colored enamel on the top of the thorax of the queen before she is introduced. She then shows up like a sore thumb on the combs. All I have to do is lift the combs gently and look carefully for a bright spot. There is the queen. I do not know how long this color lasts but I know it will last for a year and it is still very plain when I take the queen out at the end of the season. I haven't yet found an average queen that will keep a colony here in Texas, filled with brood more than one year so I practice annual requeening.

John L. Gwaltney, Texas.

— V —

An elusive queen may be localized this way: Move the colony to one side

and put an empty hive in its place. Transfer to the empty hive a comb of brood and bees and on each side of it an empty or broodless comb. Put an excluder over this hive and an empty body above the excluder. Shake all the bees in front of the new hive, put the combs without bees in the upper hive. Shake the remaining bees from the old brood chamber, close the hive, and leave it from one to several hours. Since the upper hive body is now the brood chamber most of the bees will have gone up into it through the excluder. The queen cannot. She will be on the under side of the excluder or on the one comb of brood in the lower chamber.

If two brood chambers are in use, slip an excluder between them and wait three or four days. The one with eggs has the queen. Set this to one side so the returning bees will not enter it and over-populate it, and look for the queen. Examine quickly combs of sealed brood; she is seldom on them. Examine carefully combs with eggs or empty cells. Here is where she will be if she has not been frightened away.

If it is hard to find her, this brood chamber is given a cover and a bottom board and left on one side for a time so the flying bees will return to the old stand. The queen will be easily found among the fewer bees.

W. L. Arant, Oregon.

— V —

How Do You Unite Bees?

To unite two colonies if you do not care to save a particular queen, shake three or four combs of bees in front of one of the colonies. Then bring the other colony over and shake all their bees down on top of the ones already on the ground. Do this in the evening and you will have little trouble. The two queens will settle affairs for themselves. This was used by Warden as long ago as 1722. The old bees will try to return to the old stand and if other colonies are near by they will enter among them.

E. M. Cole, Iowa.

— V —

What Do You Do With Extra Pollen?

I sometimes find three or four combs full of pollen in the brood chamber and that the queen is not using them but has gone up in the second story. What should be done with them?

L. H. Haltom, Tennessee.

Pollen is necessary for the development of bee larvae and great quantities are consumed in brood rearing. You are fortunate in having a good supply. Much of it will be used up as brood is being reared and, unless there is a very great amount, it should be left. If it is likely to restrict egg laying it may be placed in the second story above the excluder. Bees usually place their pollen in close proximity to the brood, often at the side where it is convenient, or interspersed among the brood cells. If in manipulating, the brood is elevated above and the queen kept below, pollen will also be needed above to feed the brood transferred.

Pollen from last year will be utilized for the bees or thrown out if they cannot use it. I think the disposition of it may be left safely to the bees. I have never known them to store more pollen than they could use except in the case of a queenless colony or a colony with a failing queen.

E. S. Miller, Indiana.

— V —

How to Use Two Queens to the Colony

I wish I knew how to run two queens for increase and for honey production.

Ercell Anlauf, Oregon.

Strong overwintered colonies, divided five to seven weeks before the beginning of the main honeyflow and given a second queen, produce an average of two or more times the amount of honey produced by the colony undivided.

Briefly our plan is to confine half of the colony and the old queen in the lower brood chamber, below a queen excluder, adding two supers above and then putting on a division board (inner cover with escape hole screened) then the other half of the colony on top, in which a young queen is introduced, with an auger hole entrance for flight through the front of the hive body.

After two weeks the introduced queen should be established and require another set of combs for an expanding brood nest. The division board is removed to allow the free movement of bees between both colony units. The queen below is confined below the excluder and as long as the queen above can expand her brood nest upward she will rarely go down.

Most of the honey is stored in and around the upper brood nest above which two supers are used. As honey is stored between the two the full supers are raised above and empty ones put in their place. So long as the supers in between are not allowed to become filled with honey very little

(Please turn to page 362)

THE PURE FOOD LAW

HOW little we of the present day appreciate the protection offered to the beekeeper by the pure food law. Prior to its enactment the adulteration of honey was so general as to destroy all public confidence. The report of the Dairy Commissioner of New Jersey in 1888 gave the analysis of forty-two samples of honey. It was found that of thirty-one samples put up by bottlers only six were pure. Samples bought from beekeepers were all found to be pure. Now adulteration of honey is very rare and the housewife can depend upon the purity of the product she finds in any store. Without the protection of this law commercial honey production as now carried on would hardly be possible since honey could be produced to compete with the glucose with which it was formerly so generally adulterated.

— V —

BEEKEEPING FORECAST AS IMPORTANT FARM SPECIALTY

ROGER BABSON says, "Beekeeping will be among the side lines—or even the main lines—of young farmers who want to be different." Forecasts of this kind are on the increase. It appears that the farmward urge is irresistible for many people. They feel that farming is a great life but none too lucrative. Hence the hopeful search for specialties such as chemurgics (industrial uses of farm products) or other income possibilities. The bee boosters claim more than a hundred uses will be discovered for beeswax; they preach the virtues of beekeeping as a nice line for farmers. Forecasters are rare who predict big business for any of the farm specialties, but such items may lead to improvement of livelihood.

— V —

BEE CLUBS

THE 4-H clubs are most helpful in giving the youngsters the proper start with the particular project in which they are interested. The number of bee clubs is much smaller than the number of calf or pig clubs and this may be due to lack of interest on the part of the beekeepers. Now that public sentiment is looking

toward the return of the farm apiary to secure the necessary distribution of bees to secure pollination, it is important that beginners get the right start. We need more beekeepers, but we need good ones, and the club is one of the best agencies for starting them right.

— V —

BEEES COMING BACK TO THE FARMS

THE decline in average yields of clover seeds offers a serious problem in the reconversion of American agriculture. The tendency in recent times has been to make honey production a specialty instead of a farm side line as in former years. The result has been to bring together a few large beekeeping outfits widely scattered and leave the average farm without means of proper pollination.

Now the public is becoming conscious of the fact that the production of honey is of minor importance in comparison with the services which the bees render in pollination. As a result, farm leaders realize that bees must be brought back to the farms to a much larger extent if we are to have a prosperous farming industry.

For a time, official agencies discouraged the small beekeeper and encouraged the specialist as more efficient. It was also argued that the small beekeeper was more likely to spread disease. The specialist can produce honey in greater volume, but the public attitude is changing and promises to offer more encouragement to the sidelineer and the hobbyist in an effort to secure an evener distribution of bees.

— V —

HUBAM IN THE SOUTH

SWEET clover is moving southward. A few years ago there was a great expansion in acreage of this crop in the Midwest and in the Plains States. During the past two years there has been a great decline in sweet clover acreage in the midwest region but a corresponding increase in Texas. It is especially popular in the heavy black soil areas of the central part of Texas. Hubam clover is the variety commonly grown and we are told that more than two million pounds of Hubam seed were harvested in one soil conservation district.

The organization of the Soil Conservation Service is giving a great

boost to the spread of legumes and their pasture improvement program promises much for stabilization of the bee pastures.

— V —

THE BEE GARDEN

AN enthusiastic side-line beekeeper writes that he has found great satisfaction in watching the activities of his bees while visiting the flowers in his garden. Living as he does in the midst of a great industrial region in wartime he is subject to much emotional strain and feels that the relaxation which he finds in the bee garden has helped to maintain his sanity.

The stress of wartime uncertainties together with long hours at work and the highly nervous state of those with whom he is associated tends to wear him down. Watching the bees flitting from flower to flower, gathering their loads of pollen and nectar, provides the right atmosphere for relaxing tired nerves and helps him retain confidence that there is still hope for the world.

The honeybee has adjusted itself to changes that have come through the long centuries of the past more successfully than most species, and has survived from a very ancient time. Few animals that were present when the bee first appeared upon the earth still remain. Even man himself appeared at a much later date, and unless he manifests more intelligence than is as yet apparent, he is in danger of extinction long before the honeybee shall disappear.

There are many lessons to be learned from the bees and association with these busy insects provides an efficient medicine for the ailing human race. No more interesting diversion can be found than the cultivation of a bee garden.

— V —

STILL TIME TO REQUEEN?

ARE your colonies going into winter quarters with young vigorous queens, besides all the other fall requirements? Spring started in March with a warm spell. Intermittent weather delayed the honeyflow. When it came it was late. Now a favorable fall has called for more colony renewals. A long heavy season for egg laying for the queen. Will she carry over, or will we have disappearances during winter and probably much swarming when heavy egg laying is required in the spring?

How to Do It

RELOCATION

I have used the Cale method of relocation to balance weak and strong colonies. I find this is a wonderful trick with package bees. After the package is well established exchange places with an old colony which threatens to swarm. It boosts the slow package colony to profit and keeps the old colonies at home.

Harry T. Starnes, Indiana.

— V —

SOURCE OF LUMBER

With soft pine scarce and high priced, the wide side boards in apple shipping boxes are fine as a source of material for repairing or constructing inner covers. It is of the right length and thickness and so it is only necessary to rip a single piece containing the proper width plus cleats for the sides and ends. These boxes can usually be found at grocery stores, free for the asking. This material is also ideal for replacing a broken frame-bottom bar, or section holder.

W. P. Kinard, Mississippi.

— V —

USE FOR PROPOLIS

Didja know that nothing equals propolis for fastening that handle on a tool which persists in coming loose. Fill the hole with melted propolis and insert the heated tool.

To get the propolis from scrapings, heat all in plenty of water. The wax etc., comes to the top, the propolis settles to the bottom.

E. G. Carr, New Jersey.

— V —

MOISTURE IN CELLAR— PRESSURE FEEDER

In the fall before my bees are moved into the cellar I put on a special inner cover made with a 5 inch square opening in the center, covered with screen wire. When the bees are in the cellar I cover the opening with a piece of cardboard and if moisture collects on this board I move it off of the opening until it remains dry. It is also convenient in feeding bees if they need it, by setting a jar over the screen wire.

I feed my bees in glass jars and take old covers and grind the tops off until there is just a screw band left. Fill the jar with sugar syrup, place a square of cloth over the top and screw the band on and you have a

pressure feeder with no more rusty and smelling tin feeders.

August H. Giessel, Wisconsin.

— V —

PRYING FRAMES APART

By first inserting the thin end of the hive tool between the shoulders of the frame end-bars and freeing them the frames may be removed without splitting off the spaces as often happens when the frames are pryed between the top bars. Remember this; it is worth while to save equipment.

W. P. Kinard, Mississippi.

— V —

UNITING

The newspaper method of uniting usually recommended is a messy job, dislocates the smooth return to normal and does not altogether prevent fighting.

I use essence of peppermint. It is quick, effective and penetrative. Six small drops in a medicine bottle of water, fitted with a scent spray is used. Each comb is sprayed, the odor fills the hive and reaches each flying bee at the entrance.

H. M. Pearson, England.

— V —

TO AVOID STINGS

Recently that worthy Langstrothian, James Starkey, called at my place to inspect bees. I accompanied him. I was interested in the way this veteran handled the bees without gloves and no stings. Next day I tried it and never a sting. A little sweet scented talcum powder dusted on the wrists will help you avoid stings and do without gloves.

Harry T. Starnes, Indiana.

— V —

TO STORE AND KEEP ROYAL JELLY

Remove queen cells, either from combs or cell bars, just as the bees begin to seal them. Take the larvae out. Fold the ends of the cells over to keep the jelly for a day or two. If you want to store it indefinitely, fold over the ends, dip several times in moderately melted beeswax, making sure that everything is sealed tight. Store where it is protected from insects.

William W. Wicht,
Mississippi.

A WINDBREAK

If you have no natural wind break obtain wired orange crates and open them flat. Twist the wires around those of a regular wire fence. Fasten a wood railing along the top, bracing it at intervals. I have a wind break like this made five years ago and it looks as though it would be good for many years to come. A snow fence like farmers use also makes a satisfactory wind break.

Harry T. Starnes, Indiana.

— V —

THE ANSWER

(Continued from page 360)

will be stored in the lower brood nest.

You will find this described in the Iowa State Apiculturist's Report for 1937, also in the Illinois Report, 1938.

C. L. Farrar, Wisconsin.

— V —

What To Charge for Extracting

Will you please tell me what a reasonable charge for extracting honey would be under present conditions?

W. P. Mann, Iowa.

The price usually ranges from 30c to 50c per hundred pounds. We have paid 45c per hundred although we thought it a little high. Under present conditions this might not be out of line at all. If your equipment is not of the large and more efficient type a charge of even 50c might not be too low. This charge includes returning capping wax to the beekeeper.

R. A. Grout, Illinois.

— V —

Details of Comb Honey

I wish you would ask Mr. Killion to give me advice on the production of comb honey.

Sylvester Karsten,
Minnesota.

Comb honey is difficult to produce. There are so many do's and don'ts. One must have strong colonies. We use two ten-frame bodies for all colonies until the start of the honeyflow. Each colony is then reduced to a single body when the first comb honey super is given. Bees are shaken from the body we take away in front of the body that is left. This extra body is removed to use on a weaker colony or to be filled with honey on some other colony.

Colonies shaken down this way will start working the super provided there is a good flow. In this super there must be a bait section of empty comb to coax the bees.

If you can secure copies of the American Bee Journal for March, April, May and June 1942, I am sure you will find a description of the plan we use.

Carl E. Killion, Illinois.

WORKERS MATING

(Continued from page 353)

been observed, once in Prussia (19) and once in England. (20).

f. Remember our premise that what has been seen to happen occurs more often unobserved.

g. It is thus proper to postulate that since such coupling has twice been observed it has happened unobserved on other occasions probably more often than we imagine for, compared with the chances of not seeing such matings, the chances of spotting it are small indeed. How often, for example, has anyone seen the coupling of a queen and drone, though so common an occurrence?

Such were the steps whereby I deduced than "in the atavistic phenomenon of a mated worker lies the most logical explanation for 'The Unexplained Queen'."

References

- (1) The American Bee Journal, March 1945, p. 86.
- (1a) The Bee World, Vol. XX, No. 12, p. 133.
- (2) The British Bee Journal, Vol. X, No. 116, p. 171.
- (3) *ibid.* Vol. XLV, p. 281.
- (4) *ibid.* Vol. LI, p. 324.
- (5) *ibid.* Vol. XXXVII, p. 363.
- (6) The Bee World, Vol. II, No. 5, p. 61.
- (7) The British Bee Journal, Vol. LII, p. 243.
- (8) The Bee World, Vol. XVIII, p. 68.
- (9) Gleanings in Bee Culture, Dec. 1936, page 728.
- (10) The Bee World, Vol. XVII, p. 74.
- (11) Gleanings in Bee Culture, Dec. 1936, p. 729.
- (12) *ibid.* July 1936, p. 401.
- (13) The Bee World, Vol. III, No. 5, p. 119.
- (14) *ibid.* Vol. XI, p. 45.
- (15) *ibid.* Vol. XII, p. 68.
- (16) *ibid.* Vol. XIV, p. 63.
- (17) The British Bee Journal, Vol. XI, p. 406.
- (18) The Bee World, Vol. XIV, p. 141.
- (19) The British Bee Journal, Vol. XI, No. 132, p. 213.
- (20) *ibid.* Vol. XLVIII, p. 629.

— V —

THE CAUSE OF PARALYSIS OF HONEYBEES

(Continued from page 355)

the healthy bees biting and pulling at the sick one (a characteristic of paralysis in colonies during warm weather), perhaps in their efforts to get them out of the hive. Only bees that linger in a sick condition in the hive during warm weather would lose their hairs in this way. The condition would not be expected to occur among bees in cages or in colonies when infected bees die quickly, or when activities of bees are restricted by cold weather or other causes.

One explanation of the small number of hairless bees at Hope might lie in the fact that the disease was unusually malignant during winter. The variance in experimental results with extracts from different

American Honey Institute

Commercial State Bank Building, Madison 3, Wisconsin

Almost overnight the whole world changed and a new age is upon us.

— V —

The post war period we heard so much about is here. Some trade observers say that the seller's market may vanish as suddenly as war came upon us or as the post war period descended. The age-old law of supply and demand will be the order of the day. Two and two will make four. Competitive buying and selling will be with us. What will the future hold for honey?

During the first World War people used honey and liked it for its deliciousness and food value. After the war many went back to their previous habits partly because honey was not available the year around on the store shelves.

Today things are different. From the letters that come to the office from every section of the country we hear that honey is now recognized for its great value and will be in continued demand. The honey supply in the cupboard will never be allowed to run out.

Let us keep honey available to the homemaker the year around.

— V —

National Honey Week will be celebrated the last week in October. Two leaflets will be available for you to distribute. The price on the leaflets is sixty cents per hundred or \$1.00 for 200 leaflets (prepaid). Sample copies will be mailed to you upon request.

— V —

The new Honey-Cereal leaflet is now ready. You will want to distribute a number of these. Cereals call for plenty of honey.

A sweet Combination—Honey and Cereals.

— V —

A small pocket calendar for 1946 is now available. The two national honey weeks are designated. The out-

side cover has the caption, Start the Day—the Sweet Way—with Honey. Inside the cover—the calendar. On the back cover—

Honey for Health,
Honey for Joy,
Honey for Work and Play;
Honey, a Sweet,
Honey, a Food,
Honey Every Day.

Space on the back cover is left for imprinting. If you desire to have a number of these imprinted with your name and address, may we hear from you soon. The price will be fifty cents per hundred. The cover will be varnished.

— V —

"An Eye to Business"

Beekeepers are ordering the Institute's leaflets and books to distribute. Orders ranging from one dollar to more than one hundred dollars are received. Much more than \$1,000 worth of literature was purchased by beekeepers last month.

Honey displays should be kept at eye level.

How about "Honey" on the shopping bags!

— V —

60,000 copies of "Old Favorite Honey Recipes" were printed February first. Another printing of 60,000 was ordered on August first. More than one million leaflets on honey will be printed in 1945.

— V —

National Biscuit Company of New York has announced its sponsorship of nationwide newscasts over 155 stations beginning August 27. Running for five weeks, the program will advertise "Honey Maid Grahams."

— V —

Give me honey,
Healthful honey,
Every day.
For the money,
It is honey
That will pay.

sources may also have been caused by a difference in degree of virulence. The fact that the extract prepared from bees taken from a colony with hairless, black and shiny bees (McGregor's November sample) seemed less virulent than that from the February and June samples may indicate that hairlessness is less likely to occur when virulence is high.

CONCLUSIONS—In view of the results obtained and the observations that have been made, the conclusion is drawn that the disease of adult bees which is reported in this paper is caused by a filtrable virus. It is also concluded that the disease is a disorder of the type that has been commonly known as paralysis of adult honeybees.

The Production of Queen Bees

KEEPING RECORD OF QUEEN CELLS

By E. C. Bessonnet

AS previously stated cell colonies and grafting frames should be numbered and the information placed in a note book. The following record is an illustration.

March 1st, 1942	
Breeder No. 747	
Colony No.	Frame No.
1	45
2	41
3	36

It will be seen that the colony numbers run consecutively while the frame numbers don't.

Breeding colonies are given some identifying letter or number so records may be kept of their daughters. When queens are laying from the cells grafted on March 1st, (which will be about the 20th) it is easy to check back and find which breeder was used for that day's graft. The indicator on the nucleus will be on the first and the note book gives us the breeder number. The nucleus cover has the thirty-one days stamped on it with an indicator similar to the one on a clock. It is moved to the date the cell's were grafted. (pictures of this were in the last issue). Cells put in on the 10th for instance, were grafted on the 1st and the indicator is pushed to the 1st when the cell is put in. The operator knows that the nucleus with cells grafted on the 1st must be checked as soon as possible after the 20th.

On the end of the nucleus cover is another indicator used to mark the condition of the nucleus. After the nucleus is checked, if the queen is there but is not laying the indicator is put at a left angle. If the queen is laying it is raised up straight. When the queen is lost or removed the indicator is set at a right angle. When the cells are being put out all the indicators that are at right angles show that a cell is needed in that nucleus. Immediately after putting a cell in the nucleus, the end of the indicator is pushed out of sight and the one on the top of the cover is moved to grafting date.

At times the nucleus needs special attention as the giving of a comb of brood, or the addition of bees. To show this another indicator on the front end of the cover is painted a different color. For instance if brood is needed this indicator is at a right

angle, when bees must be given it is straight up.

While these indicators seem complicated, in reality they cover the entire operation and make the work effective. If laying queens are being checked the operator has his eye set for the dial date and nothing else. When he is putting out queen cells he looks for the end indicator at right angles. If bees are brought in for restocking he keeps his eye on the other indicator. So in catching queens the straight end indicator is the one he is looking for. The operator walks by nuclei without hesitating and finds what he is looking for without difficulty.

Behavior and Response of Bees in Nuclei

Successful operation of a queen yard depends on how well we cope with the behavior of the bees and what we do to keep them satisfied. We must acquire some knowledge of the bee's habits and make our plans to fit. Queen nuclei are unlike full colonies, as we constantly get them off balance and if we are not able to overcome this condition the response will be negative. Bees demand things which must be provided and the more we learn about these things the more queens we produce.

During the first stocking we have a small swarm of bees like a package, only smaller, containing about a pound of bees. Some producers use brood but I find cutting good brood combs costly and unnecessary to get nuclei into operation. Of course more bees are required without the use of brood but considering the amount of brood ordinarily used, the number of bees in the cage and the number not as yet emerged are about equal. Cutting and tying brood is a messy job and there is no point in it.

It is the second round of nucleus operation which requires special attention since the bees are older and their response is different. They realize they are fighting a lost cause and ordinarily give trouble. If the bees have not been flying too much they will still look comparatively fresh and in condition to accept another cell. However, if they have been active they will be worn and the chances of getting a queen are small. There are two things to do to balance

their morale. First, bees may be added and, as an alternative, a comb of brood from another nucleus that can spare it may be used. I employ the large indicator to show a nucleus that has brood to spare by setting the indicator in a special position.

When the nucleus is found to need brood the indicator showing the nucleus with brood is easily found. Should there be a nucleus needing brood and no nucleus to spare it, the needy one is marked by moving the indicator so that when brood is found it can be supplied.

At times nuclei have dwindled from some cause and brood will not put them in good condition. If so the indicator is fixed to show that it needs more bees.

Under natural conditions we know that bees could not produce queens with old worker bees because it is impossible for them to start a cell from larvae that have reached the fourth day. Why then should we expect the nucleus to work in harmony with us if the bees have reached an age that puts them in a hopeless condition? More young bees or brood must be provided to give them a natural grip and allow them to respond to management.

Remember too, bees usually build queen cells during a honeyflow. Therefore feed at the time the nucleus is started and when the queen is removed. It will improve their morale. If pollen is mixed with the syrup it will help the nucleus considerably by providing essential food.

Caging Queen Bees

The proper handling of queens during caging seems a small matter but considerable damage can result from handling queens roughly and exposing them unduly to temperature extremes. During spring, when the weather is either cool or cold, some precaution must be taken to avoid chilling queens. So, during summer, heat can kill queens outright in queen cages unless they are protected. An insulated box can be made which will protect queens from either heat or cold.

During caging the queen should be picked up by the wing and headed into the opening in the cage. Nurse bees are important. Bees that are too young will not survive nor take good care of the queen. If too old they are not satisfactory. Bright bees in their prime are the best. In early spring, twelve to fifteen bees are about right to go with the queens. In the summer about eight is enough.

Queens that are to be clipped should be held by the thorax after they are caught by the wings. The abdomen is delicate and at no time should the queen be held by the abdomen. Many good queens are injured by improper handling.

Before catching a queen she should be permitted to walk over the comb so that if there is any defect in her it can be noted. Some queens are found crippled and weak and are destroyed. It is important to allow the queens to lay sufficiently to maintain the population of the nucleus and this too gives the producer a chance to note that she lays normally. Only good layers should be considered for shipping.

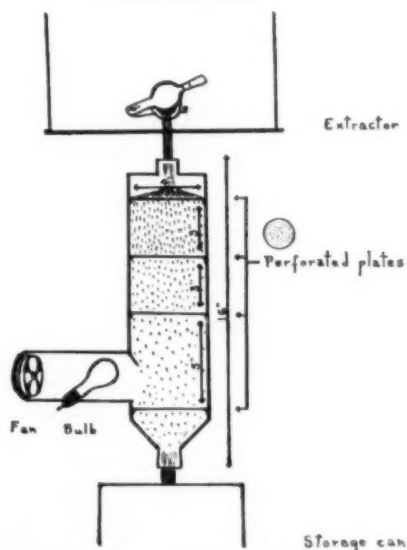
In some lots the queen producer is asked to mark the queen. This is more difficult than clipping. Handling paint is messy and usually a helper applies the paint while the other holds the queen by the thorax. A small brush or match may be used. Good enamel paint is used and be careful that it is well mixed as some paints have a thinner that is fatal if too much is spread on the body of the queen.

— V —

DEVICE FOR RIPENING HONEY

A cylindrical vessel, 4 inches wide and 16 inches long, containing four perforated plates, 3 inches by 3 inches, and 5 inches apart. There is a fan tunnel which obtains the heat from a 60 watt bulb. To the end of the tunnel is attached a 2 inch fan to drive heated air up through the vessel, gathering much of the moisture from the honey. The honey is run from the extractor through this vessel into the storage cans. We use 60 pound tins as storage tanks. The fan is driven by a small electric motor which runs on two volts. Any particles which come from the extractor with the honey are retained by the plates. The honey is exceptionally clear and sparkling.

H. Wilkins, Secretary,
Camanthenshire Association,
Wales, England.



OUR COVER PICTURE— ASTER

Over much of the United States the asters are the last flowers of the season to provide forage for the bees. Both pollen and honey in abundance are produced by these flowers which are of very wide distribution. There are more than 200 species of asters, some of which are found in Europe, some in Asia, some in Africa and more than 100 in the United States. No matter in what part of the country the beekeeper may live his bees are likely to be within reach of some variety of aster.

Coming so late in the season it often happens that aster honey is poorly ripened and the bees winter poorly as a result. At times it is mixed with honey from goldenrod giving it a rich golden color but when pure it is said to be of light color and good quality. It granulates easily and it is not uncommon to find the bees clustered on combs of granulated aster honey late in the season.

Largest crops are commonly reported from the southeastern states from Kentucky to Georgia. There it is regarded as the principal source of surplus in many neighborhoods. Aster *tradesantii* which is found from Ontario to Saskatchewan and southward to the Gulf of Mexico is the species most widely recognized as a honey source but the bees work on dozens of species in the region east of the Mississippi River.

These plants diminish in importance toward the Southwest and few reports of aster honey are found in the southern plains area and westward.

When there is a heavy honeyflow from aster there is a strong odor present in the apiary which disappears as the honey is ripened.

— V —

HONEY COOPERATIVES

"Organizing Honey Marketing Cooperatives in Wartime" is the title of Miscellaneous Report No. 79 of the Cooperative Research and Service Division, Farm Credit Administration, U. S. Department of Agriculture at Washington, D. C. and has been written by Mr. Henry M. Bain.

Mr. Bain stresses the fact that during wartimes, the beekeeping industry is especially important in three particulars, first the need for adequate pollination for agricultural crops, two, increased need of beeswax in waterproofing planes, ships, artillery pieces, etc., three, heavier demands for honey, due in part to the reduced sugar supplies.

Mr. Bain describes farmers' cooperative association, the benefits

beekeepers may expect from cooperative marketing, the functions of such an association and its limitations.

Also the general make-up of a cooperative, the responsibility of its members and the possible requirements to become a member.

Then is discussed the method of organization, the help that can be expected from states and from the Federal government, also the volume necessary for proper processing the execution of marketing contracts and other regulations which are stipulated in such marketing contracts of members and their need.

The latter part of the book suggests the need for a revolving fund plan, the possibility of borrowing from federal agencies, cooperatives' share of the profits and of the taxes they pay, their chance of failure or success.

The report occupies 30 pages and we assume that copies may be obtained by writing to the Farm Credit Administration at Washington, D. C.

— V —

DISEASES OF FARM STOCK

The length to which some industrial firms are willing to go to cooperate with us and to arouse interest is shown in a hundred page, paper bound book published by the Animal and Plant Health Department of McKesson & Robbins, the large drug and pharmaceutical firm. The book is designed for free distribution and covers the diseases of farm animals with suggestions for treatment according to the best scientific methods.

— V —



G - - GOSH!

But, darn it, I'm telling yuh—You don't look for fowlbrood in a poultry house!

● THRIFTY QUEENS ●

We can make prompt shipment.
1 to 24, 90c each; 25 to 99, 80c each;
100 up 75c each. THRIFTY BEES are
guaranteed to please.

W. J. FOREHAND & SONS
FORT DEPOSIT, ALABAMA
Breeders Since 1892

ROOT QUALITY BEE SUPPLIES

GLASS AND TIN CONTAINERS
HONEY AND BEESWAX WANTED

M. J. BECK CO.

Successor to M. H. HUNT & SON
510 N. Cedar St., Lansing, Mich.

NOTICE

We can't accept any more
orders for shipment this season.
We wish to thank our customers
for their orders and many nice
letters. For the orders rejected
please accept our regrets. Will
accept orders for next spring
delivery at previous prices.

O. K. ANDERSON & SON
COFFEE SPRINGS, ALABAMA

Leather Colored Italians

It's time to think of next season, so
be sure to remember that our bees are
real honey getters.

Gold Flat Apiaries
NEVADA CITY, CALIFORNIA

Mr. Honey Producer

Join a progressive cooperative now and safe-
guard your future market. We need the honey
at ceiling prices. You need us to safeguard
the time when selling is hard. Join now.

For particulars write

Illinois Honey Producers Assn.
Mt. Sterling, Illinois

We Can Book a Few More Orders

FOR 1945

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Southern Hemisphere is the

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Subscription 5 shillings per year, start
any time. Enquire for International
money order for 5 shillings (Austra-
lian) at your Post Office. Write now
to The Editor, P. O. Box 20, West
Maitland, New South Wales, Australia.

Bright 3-Banded Italian Queens

The kind that every beekeeper is
proud to get. Gentle, good honey pro-
ducers. Prices balance of season.
1 to 24, \$1.10; 25 to 99, \$1.00; 100
up \$.90.

TAYLOR APIARIES
LIVERNE, ALABAMA

Meetings and Events



Morley Pettit

We were shocked to learn by wire
from John C. Hogg, Tifton, Georgia,
of the loss of Morley Pettit from a
heart attack, September 13, at Tifton.

Morley Pettit has been an out-
standing figure in beekeeping for
years. One of those few producers
and practical operators who knew al-
most every angle of the game and still
stood out as a leader in the industry.

Years ago Morley Pettit frequented
the Washington offices at the time
when we were there and became a fast
friend, one who advocated beekeeping
as a gentleman's occupation, a real
farming venture that would call forth
the best in a man and which would
give him an outlet for the best of his
talents.

For years Morley Pettit was known
throughout Canada as a teacher and
educator in beekeeping at the Ontario
Agriculture College, Guelph, Ontario.
He and his sister also operated large
apiaries with the very best machinery
and buildings and the finest manage-
ment and equipment.

Later Mr. Pettit decided to produce
bees for his northern yards and went
to Georgia. His successful oper-
ations there resulted in the estab-
lishment of a business in package bee
and queen production which grew to
be equal to and often better than his
honey producing venture in Ontario.

He was always in the councils of
national affairs and in attendance at
both the southern conferences and
in the annual meetings and con-
ventions in the north. He knew most
of the larger beekeepers by first
name. We shall indeed miss him.

Mr. Pettit is survived by his wife,
Mrs. Louise Risdon Pettit, who will
return to Canada to make her future
home after she disposes of the busi-
ness interests which are located in
Georgia.

Bronx County (N. Y.) October 14

The Bronx County Association will
hold the October meeting, Sunday the
14th, 2:30 P. M. at the home of Mr.
Lloyd Jones, 1727 Undercliff Avenue.
A demonstration will be given in the
winter protection of colonies and a
demonstration of proper winter
stores. Other bee problems will be
considered. Refreshments served.
Beekeepers welcome.

Harry Newman, Secretary.

— V —

Southern States Federation to Hold a Joint Meeting

Present plans of the Southern
States Federation are to hold a joint
meeting of the Federation, the
Georgia Beekeepers' Association and
the Florida Beekeepers' Association
in Valdosta during the first half of
December. Further notice will be
available in our next issue. Many of
the details of the conference have to
be deferred because of changing con-
ditions.

G. G. Puett, Pres. Southern
Beekeepers' Association.

— V —

New Rochelle (N. Y.) October 21

The New Rochelle Beekeepers
Association will hold their regular
monthly meeting on Sunday, October
21st at 2:30 P. M. Members will be
notified by our secretary-treasurer
Mr. James A. Bailey of the appointed
place for this particular meeting.

A. M. Barnes, Ass't. Sec'y.

— V —

Minnesota to Meet with Horti- culturists

The Minnesota Beekeepers' Associ-
ation will hold its annual meeting this
fall in conjunction with the Minnesota
State Horticultural Society. Meet-
ings will be at the Curtis Hotel,
Minneapolis, and the show and ex-
hibits at the Northwestern Bank.
Guest speaker will be Mr. H. J.
Rahmlow, secretary of the Wisconsin
Beekeepers' Association. Mr. Rahm-
low's talks will be accented by colored
movies made in cooperation with the
Central States Bee Laboratory, Mad-
ison, with Dr. Farrar as "leading
man."

Chas. S. Hofmann,
Secretary.

— V —

Franciscan Honey Festival

One thousand people from Lemont,
Chicago, Peoria and many other com-

munities gathered at St. Mary's Seminary near Lemont, Sunday, September 2, to join the Slovene Pilgrims in their 20th Annual Honey Festival. It was a regular outdoor picnic with music through the dinner hour. Bingo, radio broadcasts, special musical features were aided by electrical recording equipment which also was used to prepare souvenirs of recordings of persons attending the festival.

Rev. John Ferlin, (Father John), displayed his bee hives and talked about the subject of beekeeping both from the standpoint of the amateur and professional.

— V —

H. B. Parks Leaves Experimental Research



H. B. Parks, for twenty years in charge of the Texas Beekeeping Research Laboratory and Texas State Apicultural Library, has retired to take up special work in botany at the A. & M. College Experiment Station. As a research scientist he is well known all over the United States. He is also a geologist of note.

Parks was truthfully represented as the honey plant wizard of Texas. He often received and identified a hundred honey plants a day for beekeepers and is credited with having catalogued 3,000 valuable plants raised in Texas.

— V —

Ohio Summer Meeting

The two day meeting of the Ohio Association was held at Medina, July 31, and August 1, with the A. I. Root

Bessonet's Italian Bees and Queens

Plans are now under way for the 1946 shipping season. These plans call for improved methods and better bees and queens than in the past. Package orders have been rushing in. Have you placed yours? If not act promptly. Some queens available at prices previously advertised.

Bessonet Bee Company : Donaldsonville, La.

"HONEY GIRL" ITALIAN QUEENS

1 to 3, 90c each. 4 to 11, 80c each. 12 up, 75c each. 100 or more, 70c each. Will ship in lots to suit your needs.

Twenty odd years of selective breeding for hardiness, productivity and other qualities you will like when you stock "HONEY GIRL" Italians.

Queens received dead will be replaced if returned promptly in their own cage. Certificate of inspection with each shipment.

St. Romain's "Honey Girl" Apiaries
Moreauville, Louisiana

RED STICK APIARIES & CO.

PACKAGE BEES — QUEENS

Twenty-four years as commercial queen breeders. Oldest combless package bee shippers in Louisiana. Special priority to returned veterans with empty equipment.

ITALIAN STOCK—RESISTANT STOCK—YOUR CHOICE

Quantity	Queens	2-Lbs.	3-Lbs.
1-24	\$1.25	\$4.00	\$5.00
25-99	1.15	3.75	4.80

Terms: Remittance with order.

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Main Office, 125 Lessard St., Donaldsonville, Louisiana, Telegraph, Western Union

SUCCESSFUL PACKAGE-BEE BUSINESS FOR IMMEDIATE SALE

Owing to death of its owner, Mr. Morley Pettit. House and shop available if desired. Communicate with

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403 W. 14TH STREET

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CARNIOLAN QUEENS—No more queens for balance of season
PLAN NOW for 1946 season. Include CARNIOLANS.
EPHARDT'S HONEY FARMS - PLAUCHEVILLE, LOUISIANA

ITALIANS

QUEENS

CAUCASIANS

Daughters of Queens Bred for Resistance

Bred to Italian Drones

90 CENTS EACH, BALANCE OF SEASON

2-Lb. pkg. bees with queen \$4.00 Over 25 years a shipper in U. S. A.
3-Lb. pkg. bees with queen 5.00 and Canada. Send for free circular

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AMERICAN BEE JOURNAL . . HAMILTON, ILL

QUEENS **JENSEN'S** QUEENS
 "MAGNOLIA STATE" Strain
THREE-BANDED ITALIANS

October is the last month in which we will have any queens to offer. The supply will probably not be sufficient for all orders so, "first come, first get."

Orders are fast being booked for 1946, so we suggest you consider your possible spring requirements and book tentatively; you have the privilege of revising your orders later.

We are closing one of our most successful seasons, and many thanks to all of you who have made it possible.

QUEENS, as long as they last in October, \$1.00 each straight.

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Package Orders For 1946
 are coming in rapidly

LET US HAVE YOURS PROMPTLY FOR BEST SHIPPING DATES
 QUEENS for remainder of the season;

Progeny-Test 3-Banded Italian Strain

Also Charles Mraz's and other reliable breeders' Strain of High Quality daughters of Stock Bred for Resistance to A. F. B.

Health certificate with all shipments.

Prices: 1-9 at 90c; 10-24 at 85c; 25-99 at 75c; 100 and up 70c.

No extra charges for clipping queens.

GARON BEE COMPANY
 DONALDSONVILLE, LA.

NEEDED SUPPLIES—HARD TO BUY (We Have Them)

No. 14—4 frame Non-Reversible Extractor, Hand Power	\$14.75
No. 6—2 Frame Non-Reversible Extractor, Hand Power	11.75
10 Frame Wire Queen Excluders, Wood Bound, 5 or more, each	.80
25 Lb. Lots Thin Surplus Foundation (following sizes) 3 $\frac{1}{8}$ x16, 4 $\frac{1}{2}$ x16 $\frac{1}{2}$, 4 $\frac{1}{2}$ x17 $\frac{1}{4}$, 3 11/16x14 $\frac{1}{4}$	19.75
25 Lb. Lots "Hercules" Plain Brood Foundation	17.50
25 Lb. Lots "Hercules" Wired Brood Foundation	18.50
Brood Foundation, Sizes 8x16 $\frac{3}{4}$ or 8 $\frac{1}{2}$ x16 $\frac{1}{2}$	
HAVE YOU TRIED "HERCULES" WIRED IRONSIDES FOUNDATION?	
WITHOUT A DOUBT THE BEST FOUNDATION ON THE MARKET	
100 Sheets \$12.50	50 Sheets \$6.50
	10 Sheets \$1.35
	8 $\frac{1}{2}$ x16 $\frac{1}{2}$ ONLY
2 Lb. Package Bees with Queen (untested-untreated)	\$ 3.50
3 Lb. Package Bees with Queen (untested-untreated)	4.50
1 Queen Bee, Ultra Violet Ray Treated, each	1.25
Wire Face Bee Veil, each	.80
Bee Escapes, each	.12
Smokers 4x7 each,	1.00
2 Inch Five Staples, per lb.	.30
COMB HONEY SECTIONS—	
No. 1 Grade, 4 $\frac{1}{4}$ x4 $\frac{1}{4}$ x1 $\frac{1}{8}$, per 500	6.60
No. 2 Grade, 4 $\frac{1}{4}$ x4 $\frac{1}{4}$ x1 $\frac{1}{8}$, per 500	5.90
No. 1 Grade, 4 $\frac{1}{4}$ x4 $\frac{1}{4}$ x1 $\frac{1}{8}$, split 3 sides, per 500	7.10
Cellophane Wrappers for above sections, per 100 sheets	1.25
Cellophane Wrappers for above sections, per 500 sheets	5.50
1 Lb. Glass Honey Jars, packed 2 dozen, per case	1.00
2 Lb. Glass Honey Jars, packed 1 dozen, per case	.90
5 Lb. Glass Honey Jars, packed $\frac{1}{2}$ dozen, per case	.55
5 Lb. Friction Top Cans, packed 50, per carton	3.75
10 Lb. Friction Top Cans, packed 50, per carton	5.00
Bee Gloves, per pair	.75

TERMS: CASH WITH ORDER, F. O. B. CINCINNATI

WE WILL BUY YOUR HONEY AND BEESWAX AND PAY THE CEILING PRICES
 NO LOT TOO SMALL OR TOO LARGE. WRITE US.

We also render wax from your old comb or cappings and work
 wax into comb foundation. Write for our general price list.

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We appreciate your business in the past and solicit your future business on the merits of our service and quality. Let us quote you our 1946 prices.

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 Good truck and Lifetime extractor.
 October and November Queens

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Sunny Nook Apiaries

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Serving the National Federation

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 75c a year through your Association Secretary. Copy current issue 10c.

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we are closing the season and there will be no more queens available. Now booking orders for 1946.

B. J. BORDELON APIARIES
 MOREAUVILLE, LA.

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LORD'S ACRE PLAN

for support of the rural church? Get monthly reports of it in the

Farmers Federation News

3 years \$1 or send 2 cents stamp for sample copy. Address ASHEVILLE, N. C.

AMERICAN BEE JOURNAL

Company as hosts. The meeting was on the lawn of Dr. E. R. Root's home.

Points of Interest

Dr. James I. Hambleton although reporting belief in the effectiveness of sulfathiazole in the control of American foulbrood in practice says there is no proof in laboratory experiments that the drug will kill the spores of American foulbrood.

Dr. Hambleton also believes that the apprehension over DDT will be greatly eliminated when it is in general use. It will be used on foliage and at a time when blossoms are not out and so the possibility of contact for bees should be largely reduced.

Dr. Hambleton also believes a program should be instituted for the study of Nosema. At present nothing has been done in this direction.

Irwin Stoller, a large commercial producer of Latty, stressed the importance of building colony population to enable the colony to take advantage of honeyflows. Colonies in top condition always bring in a good crop and often keep the season from being an entire failure.

M. J. Deyell gave an interesting report of the Iowa meeting of the Nectar and Pollen Plant Committee at Atlantic.

W. E. Dunham discussed the free queen system versus the delayed Demaree system for extracted honey production. Each system has certain advantages depending on the length of the flow. The Demaree system produces the best results for a short or flash flow. The free queen system for a long flow.

Other speakers were C. E. Babcock, H. H. Root, Emerson Long, Edgar Williams, Ray Hiltner, Bob Porter, Dr. E. L. Hicks.

H. R. Swisher, Ohio.

— V —

Missouri State Fair Award

Here are the awards for the 1945 Missouri State Fair show. Display of Apiary products, William Brengarth, Boonville; Table Display for Stores, William Brengarth; White Extracted Honey, Carl Neef; Amber Extracted Honey, Carl Neef; Sealed Honey, William McCune; White Candied Honey, William Brengarth.

General display of uses of honey in food, Mrs. George Landes; Honey Fruit Cake, Mrs. George Landes; Light Honey Cake, Mrs. W. C. Pierce; Dark Honey Cake, Mrs. Ervin T. Moon; Honey Candy, Mrs. George Landes; Honey Cookies, Mrs. Ervin T. Moon.

White Beeswax, Carl Neef; Banded Italian queen and bees, William Brengarth.

— V —

F. X. Arnold

It is with sorrow I report the passing of Mr. F. X. Arnold, Deer Plain,

Illinois, July 23. His death was caused from a weak heart and dropsy. He had about twenty colony of bees and he was 75 years old. He was a great reader and always enjoyed the American Bee Journal. In good health he operated over 300 colonies.

Mrs. F. X. Arnold,
Illinois.

— V —

October Broadcast

At our recent meeting we had Everett Mitchell of radio station W.M.A.Q. who made five records for re-broadcasting on the Farm and Town hour, 6:15 to 6:45 A. M., one each morning for five mornings beginning October 8th to October 12th. These broadcasts should be of interest to many beekeepers.

A. J. Smith, Sec'y.

— V —

Equipment Priority Relaxation

We are advised by Harold J. Clay of the office of Marketing Service that recent relaxation in priority regulations of the War Production Board may be of assistance to some honey packers.

"Under a new WPB regulation called Field Program Instruction No. 1-WFA-7, Supplement 5, dated July 13, 1945, it is now the WPB policy to issue preference rating on all applications for:

(1) Equipment for the maintenance of existing processing and packing operations in the honey and beeswax fields; and

(2) Equipment for the expansion and/or modernization of those industries.

A recent WPB amendment to L-41, permitting construction up to \$25,000 in value without WPB approval may help small packers who plan to modernize or expand their plants as soon as materials are available."

— V —

New York State Meeting

The annual meeting of the New York State Beekeepers' Association was held at Syracuse, New York on August 11th.

Plans there were made for the annual winter meeting. Short talks at the meeting were given by E. J. Dyce, Dr. E. F. Phillips, C. C. Babcock, M. G. Dadant, Secretary E. T. Carey, William Walthausen, R. B. Willson, and others.

Conflicting reports were made on the honey crop for 1945. In the main, the crop will perhaps be slightly better than last year. Central and western New York fared the worst on clover honey, northern New York better and eastern New York by far the best.

While the buckwheat acreage is

small, moisture and weather prospects may be sufficiently satisfactory to insure a moderate to good crop.

— V —

Kansas

Kansas Association held their 44th annual meeting, Iola, August 12th with some one hundred members and families present. The next meeting will be held in Iola the second Sunday in August, 1946. The following officers were elected: President, O. A. Keene, Topeka, Kansas; Secretary-Treasurer, W. N. Cline, Fredonia, Kansas; Vice-President, Harold S. Hon, Severy, Kansas; Vice-President, Ivan Lawrence, Parsons, Kansas; Vice-President, Alfred Krone, Sycamore, Kansas; Vice-President, E. C. Hawley, Iola, Kansas.

W. N. Cline, Secretary.

— V —

Middlesex County (Mass.)

On Saturday, June 30 about 60 beekeepers of the Middlesex County Association gathered in the welcome shade of the apple trees in Mrs. Hollis Webster's herb and bee garden near the green in Middlesex. Mrs. Webster's cool delicious herb punch refreshes every one. Hives were open by Mr. Molin of North Reading and Mr. May of Andover. A practical demonstration of transferring natural combs with brood, bees, stores and queen to movable frames was enjoyed by everyone. The queen was caged and painted and returned to her workers.

Mrs. Webster identified the herbs in bloom with bees on the blossoms, spoke of the use of the herbs, distributed printed folders listing the use of the honey plant and gave the guests growing plants and bouquets.

To supplement the picnic supper Mrs. Webster invited members to sample Boston style baked beans baked with herbs and cottage cheese spread infused with cucumber herb, bush onion and two others. Ice cream was supplied by the club.

One colony was found to have foul brood and a practical demonstration in the treatment of disease was given by Harold R. Stevens, president and Walter Copeland, president of the Massachusetts Federation. Bees were killed with cyanogas and combs cut out for rendering and the frames and the papers used were consumed by fire.

A. M. Southwick, Sec'y.

— V —

Kansas Research in Legume Production

President M. S. Eisenhower, Kansas State College, announces the financing of an agricultural research project to increase the production of

legume seeds. The project is to be financed for two years by the Midwest Agricultural Foundation, Omaha, Nebraska, with a sum of \$1,000 available each year.

The first year emphasis will be on alfalfa seed production and the emphasis will be on the study of those insects that promote the setting of seed. The project will be directed by Dr. R. L. Parker of the Department of Entomology.

— V —

Federation Membership

438 Individual \$5.00 members.

36 State Associations.

6 County Associations.

Come on producers and associations—with your help and cooperation, together we can change those figures to 500, 40 and 10 by the time of our next News Letter.

The newest state affiliation is that of New Jersey with 530 members submitted by Elmer Carr. That total is exceeded only by Indiana's 800. The New Rochelle (N. Y.) is the latest local association to affiliate.

Recent reaffiliation of state associations are Washington with 65 members, Arizona with an increase of 16 to 41, North Dakota with 37 to 30, and Arkansas with 71 to 92. State associations can grow too, and in union there is strength.

Of states with unaffiliated state associations, according to the listings in the May issue of *Gleanings*, those without associations are Delaware, Nevada (Apiary Commission), New Mexico, and West Virginia. Three others listed as without associations we have on our affiliated list.

What then about Massachusetts, Connecticut, Texas, Tennessee, South Carolina, Mississippi and Florida? Are these associations extinct, just inactive, or is our Federation just a name, deserving no support, no co-operative effort in its attempts to serve the producers. We believe otherwise and under the guidance of its Executive Committee it will grow bigger and better, accomplishing more and more services for its members.

— V —

Message from Federation Secretary

I take this opportunity to extend my personal greetings to all beekeepers.

When I was offered this job as secretary-treasurer of the National Federation, I accepted it as an opportunity to do the kind of work I enjoy; an opportunity to bring together all the different ideas and ideals and trials and problems of beekeepers in such a way that the ideas and ideals may be extended and perpetuated, and the trials and problems may be minimized or eliminated; an opportunity for all the beekeepers to be bound together by their common inter-

ests rather than be held apart by their small differences.

The duties and responsibilities I inherited from Dr. Milum cannot be taken lightly. Whether beekeepers can or cannot combine their resources and abilities for the better solution of their problems will be determined by the rise or fall of the Federation. Its success will insure progress along all lines of beekeeping activity. Its failure would probably leave the beekeeping industry without any national voice for at least a generation. It must grow.

I have just returned from Grand Valley, Colorado, where I spent nearly a week with Mr. Holzberlein, the president of the Federation. We discussed policies of the past and of the future and found we were in agreement on all the fundamentals.

State and county and regional associations are the foundation and starting point of the Federation. They must have all possible assistance from the Federation to enable them to grow and to function in the best interest of their membership. This is not to say that all associations need help, but that we should be prepared to help when needed. It is well within the province of the Federation to assist in forming beekeepers associations in those areas where there is now none.

Individual memberships at five dollars per year were provided for at the last annual meeting, and these individual memberships are of the utmost importance at the present time because they are the source of a large part of the finances of the organization. We have a few less than five hundred at the present time, and we need several thousand if our program is to be extended as we feel it should be extended.

It is a program of, for, and by the beekeepers and can be supported without the embarrassing solicitation of funds from other groups. You, in your spare time and in your community can materially help by asking your beekeeping friends to become individual members.

It is the intention that the secretary shall attend as many meetings and meet as many beekeepers as time and finances will permit; spread the message of the value of organized effort to all beekeepers; arrange as much publicity as possible on bees and pollination and honey and related subjects; and serve as a general clearing house for news and the problems of beekeepers.

Needless to say, no large amount of time will be available for any specific task, and a very large proportion of the work must be done by committees. All the committees have important problems under consideration. Probably none of them will have better opportunity to be of service to the beekeepers than that of Bee-

keepers' Rights. Litigation against bees and against beekeepers has been of regular occurrence for years. Modern methods have added poison sprays and dusts to so many areas that there is need for definite decisions and rulings by the courts to establish the circumstances under which a beekeeper may expect to recover by court action the damage he has suffered by indiscriminate use of poisons.

If and when the Federation becomes financially able, it could logically assist in carrying through the courts those cases that would, by the broad principles involved, have a value to a considerable number of beekeepers. Right now we need a good lawyer, who is also an enthusiastic beekeeper, to serve on the Beekeepers' Rights Committee.

The Honey and Pollen Plants Committee seems to have beaten all the rest to the punch and turned in a piece of work that is pioneering in its field. Their Summer meeting at Pellett Gardens in July was attended by leaders from the fields of horticulture, agronomy, botany, soil conservation, seed production, general farming, and beekeeping. A complete report of this meeting is being prepared for later publication and will be available to all members.

Annual Meeting

The annual meeting will be held this year in Chicago, as in the past years. The date will be tentatively, January 15, 16, and 17. Mr. Puett extended an invitation for the group to meet in Georgia this year, but travel conditions are still in such condition that some central location seemed indicated. It will probably be wise in the future to hold these meetings in various parts of the country, and we would certainly like to have a "rain-check" on the invitation of Mr. Puett. Make your plans now to attend this meeting.

The Executive Committee will meet January 14 at 9:00 A. M. to conclude their year of service and to make recommendations for the next year on the basis of their experience. The forenoon of the 15th will be devoted to committee meetings and to meetings of the various allied groups. Regular sessions will start after lunch on the 15th and will continue until noon of the 17th, with the final afternoon given over to committee meetings and preparations for the new year.

We want to arrange the program in such a manner that there will be an opportunity for round table discussion of the work of at least four of the committees, probably having the committee report and then allowing some time for round table or panel discussion, so that the entire group may have an opportunity to ask questions and state their opinions

on the work being done or to be done.

Of recent years we have followed this plan in the Iowa meetings and find a greatly increased interest. Perhaps it will allow an opportunity for you to clear up some of the questions that have bothered you. Come prepared to take part in these discussions and to offer constructive ideas to the committees.

We want to transact the regular business with promptness and dispatch and have time on the program for eight or ten speakers with worthwhile messages for the industry. It has been suggested that this year we have a banquet and evening of fun and frolic, preferable on the evening of the 16th. The evening of the 15th will be left open for such groups as may wish to meet at that time.

Watch the bee magazines and News Letters for complete program of the meeting.

Glenn O. Jones, Sec'y.,
National Federation of
State Beekeepers' Ass'ns.

— V —

HOW BEES VISIT FLOWERS

We have received reports of experiments conducted by G. Butler and associates of the Rothamsted (Eng.) Experimental Station appearing in the Journal of Experimental Biology Volume 20 and 21, having to do with visits of honeybees to flowers and to artificial sources of nectar.

Results indicate that bees work on flowers with the highest nectar concentration more freely than on those with less concentration. The quantity of nectar available influences the bees visits. However bees will continue to visit flowers after they have once started even though the nectar amount and concentration may not be as great as in other later flowers.

When storms threaten the more dis-

tant bees tend to return to the hive to wait until conditions become normal. A honeybee concentrates its effort on a small area as proved with flower nectar and artificial nectar.

The time spent by a bee collecting its load in the field exceeds the time spent in collecting from a dish. The time consumed in returning to the hive unloading and returning to the source of supply is about the same in both cases. Nearer dishes of feed and nearer fields of flowers are more heavily visited than ones at a distance.

— V —

NEW BRITISH BEE BOOK

A small cloth bound octavo book of 110 pages has just appeared as a Bee Craft publication and is entitled "Bees and Honey." The book is by George A. Carter who has produced several films on bees. It is intended for British beekeepers primarily.

Only a resume of subjects treated can be given, namely, the honeybee, nectar and pollen, apiary management and harvesting, queen introduction, top entrances, feeding, diseases and enemies, fruit sprays and chemicals.

That part devoted to beeswax, honey and propolis, their chemical analysis, storage, and handling is particularly interesting and instructive and applicable of course everywhere.

The book sells at 4 shillings net and can be obtained from A. G. Smith, Bracken Dene, Manor Way, Petts Wood, Kent., England.

We are anticipating securing a number of these books for distribution probably at cost of about \$1.25 to our subscribers including postage and duty.

No-Drip Honey Server



These servers hold one pound
—good serviceable plastic tops.
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DOZEN LOTS \$2.75
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By FRANK C. PELLETT

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Extra queens, each	1.25

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Carefully selected and produced for their honey gathering qualities.
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1 to 11	\$1.00 each
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50 or more	.80 each

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Health certificate and live delivery guaranteed.

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Tifton, Georgia

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THREE-BANDED ITALIANS

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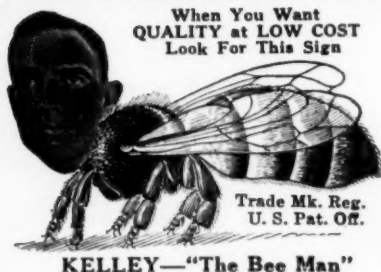
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TIN PAILS

Carton 50 five-lb. pails, wt. 26 lbs., price	\$3.15
Carton 50 ten-lb. pails, wt. 40 lbs., price	\$4.85
Carton 16 sixty-lb. cans (2½ in. opening), wt. 54 lbs., price	\$5.40

GLASS

16-oz. Economy Jars, carton of 24, 11 lbs., price	\$7.70
32-oz. Economy Jars, carton of 12, 12 lbs., price	\$4.42
5-lb. Economy Jars, carton of 6, wt. 10 lbs., 12 cartons \$5.00; 24 \$9.90	

5% Discount From These Prices on Orders of Over \$50 at One Time

WALTER T. KELLEY CO. : Paducah, Kentucky

CROP AND MARKET REPORT

Compiled by M. G. DADANT

For our October Crop and Market page, we asked reporters the following questions:

1. How is the total crop compared to 1944?
2. Is the crop all extracted and stored?
3. What proportion has been sold?
4. What percentage went in 10 lb. or smaller packages?

Crop Compared to 1944

Throughout the New England states and into northern and eastern New York, the crop seems to be considerably better than last year, perhaps averaging 25% more. However, the balance of New York and extending down into New Jersey and eastern Pennsylvania, the crop will hardly equal last year. Maryland and Pennsylvania report more than last year with Pennsylvania extremely good in some north central locations.

The eastern coast line from Virginia to Florida is far below last year, running with some reporters as low as 10% of last year and others up to 75% in Georgia and Florida.

Extending east across the South, there is probably as much as last year with some heavy reports in southern Alabama, but Louisiana and southern Texas reporting hardly as much as in 1944 with north Texas better. Arizona and New Mexico perhaps will have somewhat more than last year but not a great deal.

Early reports from Ohio seemed to indicate a failure as did southern Michigan. However, conditions have improved and probably Ohio will have as much as last year and Michigan perhaps considerably more in the northern sections. Wisconsin, Indiana, Illinois, Iowa, and Minnesota have advanced remarkably in production and reports now coming in indicate one and a half to two times as much as in 1944. The same conditions exist in the eastern parts of North Dakota, South Dakota, Nebraska, Kansas and into Oklahoma.

However, the Black Hill section and the eastern slope of the Rockies will have considerably less than last year and it is very doubtful whether southern Wyoming can equal 1944 with northern Wyoming and Montana considerably less, except west of the mountains.

Heavy bloom of fireweed in the Northwest has helped Washington and Oregon so that probably there will be more than last year. California is

"in the dumps." While some limited sections may have more than last year, it is only because last year's crop was so low and for this year, it would be indicated that not over 75% of 1944 would be produced with many sections having to feed for the winter season.

Undoubtedly the central western sweet clover and white clover areas are going to have to make up for the deficiency in most other parts of the country. Even so, the number of bees is greater in this area and the volume of production higher so that we anticipate that the total crop in 1945 will be at least 10% and perhaps 15% larger than last year, with even greater possibilities if fall prospects continue for another two weeks. We failed to mention that Utah in its southern and central sections is much above last year, with Nevada ranging considerably less.

Crop All Extracted?

Most of the large producers and many of the moderate sized ones have not been able to extract all of their spring crop and are still at it with limited help with the result that much of the honey is going to be darkened by the mixture of a fall flow although most of it has been taken off and put into the honey houses to be extracted as rapidly as possible.

In the central western areas and far into the Northeast, the prospects for fall are excellent if proper weather prevails during the balance of the season. (This is written on September 20.) All in all, the possibilities of a fall crop throughout the fall crop section should make quite a large addition to the total honey crop for the season and undoubtedly place the bees in better shape than they have been in for a long time as far as wintering is concerned, except that there are apt to be many failing queens, owing to the prolonged laying season necessary and the difficulty in getting requeening done on account of lack of help.

Percentage Sold

Far greater percentage of honey has either been contracted for, placed with the cooperatives, or sold locally than usually is the case in mid-September. This is accounted for, naturally, by the shortage of sugar and the fact that the local demand is terrific. We would estimate that probably 40% of the entire crop has

already been sold and in the Southeast even a greater percentage than this.

Percentage In Small Containers

Our question was somewhat misleading in this respect. What we tried to bring out was whether sales were being made by the producer to packers or whether the producer was packing the honey himself for local and near-by markets. Replies would indicate that far more honey is being packed by the individual beekeeper than has been the case in a long time and this is substantiated by the fact that the bee supply and honey container outlets have been hard put to furnish small packages as fast as the beekeeper wants them. This is particularly true in the case of glass, the glass manufacturers in many instances, not being able to promise deliveries of glass for two or three months or even longer after the date of order. There is no doubt also that most honey going into the hands of the packers and of the cooperatives who are themselves large packers, is either going into the markets faster than usual or is being pro-rated so as to maintain a constant flow of honey to regular customers throughout the season and until the 1946 crop arrives.

Summary

All in all, the season has been both a disappointment and a surprise. A disappointment from the fact that the prospects earlier were extremely good owing to the favorable condition of the colonies and then a sharp set-back by cool, rainy weather where queens stopped laying and the colonies quickly retrogressed so that at the beginning of the spring honeyflow, colonies were not in as good shape as they had been earlier. The surprise came later on when favorable weather developed and the central western areas, which had practically abandoned possibility of a crop, were busy putting on supers and preparing to extract before the close of the season.

Canada

Western areas of Canada have about normal crop except that southern Saskatchewan has too dry weather which will even affect the clover stand for next year. Northern Saskatchewan and extending into Manitoba is quite satisfactory and Ontario will have a fairly moderate crop, although earlier it looked like a failure. Same is true of Quebec.

HONEY WANTED Cars and less than cars
Top Prices
C. W. AEPLER CO., Oconomowoc, Wisconsin

HONEY WANTED Carloads or Less
HIGHEST PRICES PAID
LEWIS A. KONCES CO.
NORTH ABINGTON, MASS.

One Can or a Carload—What have you? Mail your offerings to us.—Prompt action. Cash on delivery
JEWETT & SHERMAN CO.
Lisbon Rd. & Ervins Ave. 1204 W 12th St.
Cleveland, 4, Ohio Kansas City Mo.

• THE MARKET PLACE •

BEES AND QUEENS

CAUCASIAN and CARNIOLAN package bees April, May, 1946 delivery. Booking orders at 1945 prices. Tillery Brothers, Greenville, Alabama.

TRY OUR THREE BANDED Italian bees and queens for 1946. Booking orders now. Alamance Bee Company, Geo. E. Curtis, Mgr., Graham, N. C.

GOOD QUEENS FOR SUMMER AND FALL REQUEENING. Gentle three banded Italian stock that has made outstanding records for honey production in areas where large crops are made. We now have the experienced help necessary to give you good queens and prompt service. Select young laying queens, \$1.10 each; 25 to 99, \$1.00 each; 100 or more, 90c each. Postpaid. H. C. Short Fitzpatrick, Alabama.

PACKAGE BEES, QUEENS, Italians, Circular free. Crenshaw County Apiaries, Rutledge, Alabama.

HONEY AND BEESWAX WANTED

EXTRACTED HONEY, any amount. Will pay cash. Lose Brothers, 206 E. Jefferson St., Louisville 2, Kentucky.

WANTED—Typical samples of honey from all or any of the following sources: alfalfa, gallberry, huajilla-catsclaw, heartsense, milkweed, raspberry, sourwood, Spanish needle, willow herb. State size of package (5 lbs or less) and price. Lucius Tuttle, Fabyan, Conn.

WANTED—From one to ten tons light clover honey or other light honey. Will pay C.O.D. or cash with order. Forest View Apiaries, Box 114, East Aurora, N. Y.

HONEY WANTED—Small or large lots. Send sample, amount and price. Coy Wade and Co., Green City, Missouri.

HONEY WANTED—Top prices paid. Write immediately. J. Wolosevich, 6315 So. Damen Ave., Chicago, Illinois.

HONEY WANTED—All grades, carloads or less. Also beeswax. Pay top prices. H. & S. Honey & Wax Company, Inc., 266-267 Greenwich St., New York 7, N. Y.

WANTED—Extracted clover honey in 60's. B. I. Evans, Windom, Minnesota.

CLOVER HONEY WANTED—Top prices for extracted, section, and shallow frame comb. Any quantity. State whether you can deliver. KEDASH BROTHERS, Chillicothe, Ohio.

WANTED—Comb and extracted honey. Clifford H. Denny, 483 Moody Street, Akron 5, Ohio.

WANT TO BUY white clover or light amber honey 1945 crop for spot cash. State quantity and price wanted. Roscoe F. Wixson, Dundee, N. Y.

WANTED—All grades of honey, carloads or less. We pay ceiling prices in cash, call for it or arrange for shipment. Sell your honey to us and we will stick by you always. The Honey Moon Products Co., 39 E. Henry St., River Rouge 18, Michigan.

WE PAY CEILING PRICES for wax, and remit the day the wax is received. Your wax made into medium brood foundation at 12 c per lb. The Hawley Honey Co., Iola, Kansas.

HONEY AND BEESWAX. HIGHEST PRICES PAID. MAIL SAMPLES. ADVISE QUANTITY. BRYANT AND COOKINHAM, LOS ANGELES, CALIFORNIA.

HONEY WANTED—All grades and varieties. Highest cash prices paid. Mail samples. State quantity. HAMILTON & COMPANY, 1360 Produce Street, Los Angeles, California.

Copy for this department must reach us not later than the fifteenth of each month preceding date of issue. If intended for classified department it should be so stated when advertisement is sent.

Rates of advertising in this classified department are eight cents per word, including name and address. Minimum ad, ten words.

As a measure of precaution to our readers we require reference of all new advertisers. To save time, please send the name of your bank and other reference with your copy.

Advertisers offering used equipment or bees on combs must guarantee them free from disease or state exact condition, or furnish certificate of inspection from authorized inspectors. Conditions should be stated to insure that buyer is fully informed.

WANTED—Extracted honey, white or light amber, in 60's. Ed. Heldt, 1004 W. Washington St., Bloomington, Illinois.

HONEY WANTED—Small or large lots. Send sample and amount. Rocke Apiaries, Eureka, Illinois.

CASH FOR YOUR WAX the day received. Write for quotations and shipping tags. Walter T. Kelley Co., Paducah, Kentucky.

ALL GRADES extracted honey wanted. Bee supplies and honey containers for sale. Prairie View Honey Co., 12243 12th Street, Detroit, Michigan.

CLOVER HONEY WANTED—Small or large lots. Send sample, state quantity, and how packed. Ellsworth A. Meineke, Arlington Heights, Illinois.

HONEY FOR SALE

CHOICE MICHIGAN CLOVER HONEY in glass. Labeled or unlabeled. One pound, \$5.75 per case; 1 1/2 pound, \$4.18; three pound, \$7.81. You will be pleased. WILDWOOD HONEY FARM, Tecumseh, Michigan.

SUPPLIES

YOUR WAX WORKED into high quality medium brood foundation for 16c pound; 100 pounds \$12.00. Fred Peterson, Alden, Iowa.

BEEKEEPER'S HOIST—\$25.00, frt. prepaid in states. Turner Mfg. Co., Corning, Iowa.

SAVE ON HONEY CONTAINERS IN MINNEAPOLIS. Pre-war quality tin and glass honey containers at pre-war prices. Friction top pails are back. Send for price list. Prompt shipments made from large stock of Lewis-Dadant bee supplies. Send list of needed supplies for quotation. TOP PRICES PAID FOR HONEY AND BEESWAX IN CASH OR TRADE. HONEY SALES COMPANY, 1806-08 N. Washington Avenue, Minneapolis 11, Minnesota.

Universal 8 pc. Tool Set \$14.85; 10 pc. \$19.85. Wrench set 6 pc. Boxend \$7.85; Opened \$9.85. Standard 1/4" 15 pc. Socket Set & case \$29.85. Tractor 3/4" 14 pc. Socket Set & Case \$49.85. Immediate shipment—Clip ad. Mail check now. Universal Tool Co., 1527 Grand, ABJ, Kansas City, Missouri.

PORTER BEE ESCAPES are fast, reliable, labor savers. R & E. C. Porter, Lewistown, Illinois.

WRITE FOR CATALOGUE. Quality bee supplies at factory prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies, Onsted, Michigan.

LARGE CASH SAVINGS can be made by letting us work your wax into either wired or plain foundation. Large independent factory manufacturing a complete line of bee supplies including extractors, etc. Selling direct saves you the agent's profit. Quick shipment from large stock. Large free catalogue explains everything. Walter T. Kelley Co., Paducah, Kentucky.

FOR SALE

FOR SALE—550 10-frame 3-story colonies of honeybees. Good equipment, ample winter stores. Will sell all or part. 811 So. Foothill Blvd., Duarte, California. Phone: Monrovia 3091.

FOR SALE OR RENT—A part of my 1000 colonies of bees because of other interests. C. McReynolds, Clearbrook, Minnesota.

FOR SALE—60 colonies of bees equipped with wired foundation. Disease free. 100 supers and frames. C. M. Barker, Millersburg, Iowa.

FOR SALE—150 colonies in M. D. hives with supers. About 50% 1945 Hollopeter queens. State inspection certificate furnished. Howard M. Myers, Ransomville, N. Y.

60 LB. HONEY CANS, mostly used once, 4 cans to wooden crate 75c; 2 cans to wooden case 50c. J. Wolosevich, 6315 So. Damen, Chicago, Illinois.

ROOT UNCAPPING MACHINE, wax press, eight frame section supers, 4,000 shallow end bars, thirty and fifty gallon honey tanks, other items. Forest Coulter, Goldfield, Iowa.

500 colonies bees, mostly three story eight frame hives. All two story hives \$9.00 each; three story \$11.00. Will throw in equipment worth \$500.00. Certificate of inspection furnished. Oscar L. Poe, Mesilla, New Mexico.

FOR SALE—500 60 lb. new honey cans, not used. W. F. Hastings, Grand Forks, North Dakota.

COMPLETE fully equipped outfit of 1500 hives, nuclei, extractor, tanks and established package and honey production in central and northern California. Al Winn, Rt. 1, Box 729A, Petaluma, California.

WANTED

WANTED—A good used 3-frame honey extractor. State price. Emil A. Legler, Basco, Wisconsin.

WANTED to buy or lease—bees and equipment. Clarence Tontz, 1503 1/2 12th Avenue, Los Angeles, California.

WANTED—Approximately 100 clean colonies with desirable package bee location. Ed. Trimble, Warroad, Minnesota.

POSITIONS AND HELP WANTED

WANTED—Two queen breeders and one helper for my Florida queen yards. Top wages to willing workers. W. D. Leverette, Fort Pierce, Florida.

WE HAVE POSITIONS open for experienced package and queen men and also a man or two partially experienced for the 1946 package season. Winter work available manufacturing and preparing supplies. Opportunity for permanent employment. Write BOX RCD, care of American Bee Journal.

TWO YOUNG MEN, returning veterans preferred, to work with trucks and bees in Florida, Central Michigan, and Northern Michigan, with partnerships or a cut in the business in view after a few months' experience if mutually satisfactory. Penn-Michigan Apiaries, 500 S. Almer St., Caro, Michigan.

HELP WANTED—Beeman for Wisconsin estate. Must be experienced, competent, reliable and take full charge of large operation. Give full details in first letter. Write Box HAB, care American Bee Journal.

Classified queen breeder package beeman to run independent unit in Louisiana 1946 season. Ephardt's Honey Farms, Brandt South Dakota.

MISCELLANEOUS

WANTED to hear from owner of farm for sale for fall delivery. Wm. Holly, Baldwin, Wisconsin.

DISCHARGED SERVICEMEN—If you are a veteran of World War II and desire information on beekeeping as an occupation, mail your questions to: Veterans Rehabilitation Committee, National Federation of State Beekeepers Associations, Rt. 5, Box 181, Lansing, Michigan.

EARTHWORM CULTURE—Send postcard for valuable FREE bulletin, with review on "Intensive Propagation and Use of Earthworms in Soil-building." Thos J. Barrett, Earthmaster Farms, Box 488-H, Roscoe, California.

RANCH MAGAZINE—Do you find it difficult to secure information about sheep and sheep ranching methods? The SHEEP AND GOAT RAISER reaches more sheepmen with more information on range sheep than any magazine published. Subscription \$1.50. Hotel Cactus, San Angelo, Texas.

THE BEE WORLD—The leading bee journal in Great Britain and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy, post free, 12 cents, stamps. Membership of the Club, including subscription to the paper 10/6. The Apis Club, The Way's End, Foxton, England.

DIFFERENT, that's all. Written and published for the instruction of beekeepers, contains breezy entertaining beekeeping comment each month. One year, \$1.00; two years, \$1.50. Sample 3 cents stamp. Beekeepers Item, San Antonio, Texas.

American Bee Journal Classified Ads
Bring Satisfactory Results.

SEEDS AND TREES

FOR SALE—Sainfoin seed. Over 10 lbs., 55c per lb. Less, 75c per lb., not postpaid. Perennial legume, soil builder, hay crop and honey plant. R. W. Brimhall, Pleasant Grove, Utah.

COURSES IN BEEKEEPING

Calls are coming in from veterans who want information about beekeeping. Here is a list of the states which give such courses and the kind of courses furnished. We will be glad to give you the names and address of the instructors if you are interested.

General Course

Alabama, California, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Mississippi, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, South Carolina, Texas, Tennessee, Wisconsin, Arkansas, Manitoba, Nova Scotia, New Brunswick, Quebec and Ontario.

Special Course

California, Illinois, Kansas, Maryland, Minnesota, Missouri, Nebraska, New York, Ohio, Texas, Wisconsin, Ontario.

Short Courses

California, Kansas, Minnesota,

Maryland, Michigan, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, Wisconsin, British Columbia, Manitoba, Quebec, Saskatchewan, Nova Scotia.

Correspondence Course

Florida, Minnesota, Missouri, Nebraska, New York, North Dakota, New Hampshire, Ohio, Pennsylvania.

4-H Club Work

Alabama, Arizona, Arkansas, New Hampshire, Florida, Illinois, Oklahoma, Oregon, South Carolina, Utah, Tennessee.

Our inquiry included a question about future plans for additional courses for returning veterans and all of those who replied indicate that when the demand arises it will be met. In other words, returning veterans will be taken care of.

— V —

HONEYDEW FROM BLACK WALNUT

In July I found bees roaring on black walnut apparently gathering honeydew, as the leaves were coated with a sticky substance. However they were going to town on it.

Also cotton has furnished nectar here in greater quantities than since 1941. The 1944-45 flow began here May 25. There was no let-up until August. Bees have gone from one source to another.

W. P. Kinard, Mississippi.

HONEY WANTED

**A can or a carload.
Top prices paid.
Will furnish 60-lb. cans if desired.**

C. W. AEPPLER CO. : Oconomowoc, Wisconsin



THE POSTSCRIPT

From Wm. A. Kyburz, of Cali, Colombia, South America, comes a letter filled with most interesting information about beekeeping in that country. He says that excess of pollen is probably a plague in many tropical countries. He has found hives with double brood chambers with the entire lower chamber solid with ten frames of pollen practically abandoned by the bees still bringing in fresh material. The queen was in the second chamber and the supers, in both of which ample stores of pollen existed. Until the discovery of pollen substitutes he had in mind selling to U. S. beekeepers frames chuck full of pollen.

— V —

Kyburz says that the tree tomato, (*Cyphomandra betacea*) mentioned in June Postscript, isn't much to write home about. It is too sweet to use as a vegetable, not pleasant enough to eat out of hand. Stewed it reminds one of apricots but it has a funny little taste and he would prefer apricots any time. It is dirt cheap in Colombia and a favorite dessert in low-grade boarding houses.

— V —

Coffee is reported by our friend in Colombia as a most unreliable source of nectar. He has watched the passing of five blooms without any honey from it and then suddenly got a whale of a crop. That sounds like basswood has behaved for me—only I have not had a big crop from it after the long period with no apparent nectar yield.

— V —

Our friend's location is at an altitude of 5000 feet which in that tropical region insures constant spring time. He reports that the bees never visit the flowers of apple, pear, peach, plum, strawberry, raspberry when they are blooming on his property. Neither do they show any interest in roses, gladioli, orchids or marigolds. They go directly to the forest where they really are busy bringing in honey.

It all goes to show that when one goes from a region where he is familiar with conditions to a different climate he must learn his beekeeping all over again.

— V —

In a book published in 1895, the government botanist for Victoria,

Australia, described a plant which has interested me. It is *Nepeta raphanorrhiza* a relative of the catnip which he described as having an edible root furnishing a delicious vegetable with the taste of fresh almonds. It is native to Kashmir and Afghanistan where large quantities of the root are reported as consumed by the inhabitants.

— V —

Ted Millen, of the Allahabad Agricultural Institute, writes me that he was unable to find it when in Kashmir last year. He found it mentioned in a book on the flora of that country but the botanist there was unfamiliar with it. Millen writes: "There are more cows than anything else in the state as it is a capital offense to kill one. No cattle can be sent out of the state and you can hardly imagine the extent of competition between man and cow for anything that can be eaten. Kashmir is the best place for bees in this country with the Punjab coming in second."

— V —

Prof. Millen is sending seed of a new radish for our test garden. He reports that he has seen it in bloom 25 days after planting and that the bees work it for hours at a time in the cold months when there is little else in bloom. The seed pods are edible while still tender and it also provides good forage for livestock. He fails to mention any use of the root which is the portion commonly used with the radishes commonly cultivated in this country.

— V —

A good honey crop from sweet clover is reported by Ed Braun, of the Experimental Farm at Brandon, Manitoba. The prospect was very poor up to July 9th but the hive on scales gained 270 pounds before the end of the month and another 100 pounds by the 15th of August. The average yield was about 200 pounds with enough sweet clover within reach to supply a far greater number of bees. Thus what looked like a very poor season turned out well after all.

— V —

Edwin Evans, of Bear Lake, Michigan, reports that the bees pay no attention to anise-hyssop in his locality. All plants have their limitations and prove disappointing in some places. When sweet clover was first becoming known to the beekeepers there was

much argument about its value because in some eastern localities the bees were not attracted to it. Most reports about anise-hyssop, however, are to the effect that the bees are swarming over it early and late.

— V —

From Mrs. E. U. Ely, of Ralston, Iowa, comes a sample of the flowers of Western Ironweed, (*Vernonia fasciculata*). She reports that the bees work the flowers like mad and that they store a very light colored pollen and a dark and heavy bodied honey of good flavor from it.

Ironweed grows from four to six feet high and is very common in mid-western pastures, especially on lowlands. It blooms in late summer and is much visited by the bees in August. Although the bees visit the flowers very freely it is seldom reported as a source of surplus.

— V —

Readers who keep bees in areas where peanuts are grown commercially will confer a lasting favor by giving us information as to the value of this crop for bees. There are conflicting reports as to the value of the peanut as a source of honey and we would like more information.

— V —

After a season of unusual rainfall from April to July we have had a dry August. The pumps at Pellett Gardens have been running constantly day and night to irrigate the strawberry fields. The honeyflow has been the best in years and still continues into September. The hive on scales has made a net gain of 544 pounds since June first and the fields are pink with heartsease. A fall flow is rare here but the prospect is good for still more honey to come in during September.

— V —

Several hundred beekeepers have planted anise-hyssop as a result of the enthusiastic reports of its attractions for the bees. We would like very much if everyone who has tried it would send us a postcard and tell us whether it lives up to its reputation in your locality. We would like also to know the kind of soil on which it is planted. A few reports have come in saying that the bees pay little attention to it, but most of those who have reported indicate that the bees visit it very freely. We would like to learn its limitations and the kind of soil on which it proves disappointing. Such reports will be greatly appreciated and will help to learn its geographic adaptation.

FRANK C. PELLETT.

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Rider and Driver, monthly, horses, sports, pleasure	3.50	.50
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DAIRYING	Per Year
Dairy Farmers Digest, monthly	\$1.00

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Better Fruit, monthly	1.00
Eastern Fruit Grower, monthly	1.00

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Cackle and Crow, The Poultry-paper	1.00
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Small Commercial Animals and Fowls	.50
Co-operative (Farmers) Digest, monthly	2.00
Modern Game Breeding, monthly, pheasants, wild waterfowl, etc.	3.00
Canary Journal, monthly	2.00
Canary World, monthly	1.25
Good Health, monthly	1.00
Frontiers, the magazine of natural history, 6 issues	1.00
Black Fox Magazine, fox, mink, m.	2.00

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One of the best periods for safe queen introduction is after brood rearing has ceased.

Daughters of stock bred for resistance to A. F. B. are a real help in the fight to control disease. Include the use of this stock in your improved management for honey production.

Get daughters from improved parentage, produced under superior conditions, and from stock which is checked for performance.

Write for shipping dates

Prices:

1-9 \$1.50; 10-49, \$1.40; 50-99, \$1.30; 100 up, \$1.25

A SUPPLY OF D. R. QUEENS NOW AVAILABLE.

IOWA BEEKEEPERS ASSOCIATION

State House, Des Moines, 19, Iowa

Bees SUNKIST Queens

Now that final victory has been achieved, the needs of the people will begin to be filled for industry and farm. We are beginning to change over to peace time requirements. This should not affect the honey producer as to loss of high prices as sugar is one item that appears on the short list.

There will probably be an active demand for packages and queens next season. We are booking orders subject to prices quoted later in the season. We offer select Italian, three banded queens and bees. Full weight packages, live delivery and health certificate. Send us your inquiries.

SUNKIST BEE COMPANY, Route 2, Box 9, Houma, La.

SINCE 1876

THE NAME (S. T. FISH) HAS BEEN IDENTIFIED WITH THE HONEY BUSINESS

S. T. FISH & COMPANY INC.

SOUTH WATER MARKET—CHICAGO, ILL.

ALWAYS INTERESTED IN FURTHER HONEY BUSINESS

Advise us now or when you are ready—What you have to offer in Extracted Honey—60 pound cans, also Comb Honey.

PHONE MONROE 1910-11

1946

Again the demand for our packages and queens will be much greater than we can supply. As always we will book only what we can ship with little delay. . . ITALIANS . . CAUCASIANS

WEAVER APIARIES : Navasota, Texas

AMERICAN BEE JOURNAL

1896—50—1945—
Years' Experience

Our Golden Anniversary

The year 1945 marks the 50th year of continued service in the manufacture of beekeepers supplies.

With this wealth of knowledge and experience we feel we are in better position than ever to give our customers that valued quality and service that has meant so much to them in the past 50 years.

In order to assure yourself of that continued service we suggest you order early this year. Although we have an ample supply of HONEY SECTIONS, HIVE BODIES, SUPERS AND FRAMES at present, from all indications the year 1945 will make even greater demands on the industry.

Write for our SPECIAL PRICE on number two (2) beeway sections ($4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{7}{8}$); also ask for our new 1945 price list of supplies now on hand and available to our customers.

MARSHFIELD MFG. CO.
MARSHFIELD, WISCONSIN

ROOT Service
 From
Chicago

Have we not well met the test
 in furnishing bee supplies wanted this season?
 Many of our customers have received all or most items of supplies ordered from us.

We will do as well for you on your late season and fall needs. Try us for the containers you want. We have ready for you—

FIVE AND TEN POUND TIN PAILS.
 SIXTY-POUND CANS WITH $2\frac{3}{8}$ INCH CAPS.
 FIVE AND TEN POUND GLASS JARS.
 ECONOMY JARS, ALL SIZES.
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 SECTION CARTONS AND WRAPPERS

We offer best makes with good prices and ready service. Ask for our container list.

We Want Honey and Beeswax

A. I. ROOT CO. OF CHICAGO

224 West Huron Street
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Our Labels meet these requirements at very reasonable prices

Send for samples.

American Bee Journal
Hamilton, Illinois

HONEY PRODUCERS

PACKAGE BEES

The large buyers are now placing orders for spring delivery. Most every day orders are received for large lots of packages. Naturally they are requesting the choicest shipping dates. As daily shipments are limited in quantity it is to your advantage to order early. We will not book more packages for a day's shipment than experience shows we can deliver. Can we count you in this forward-looking, progressive lot of producers?

ROSSMAN & LONG

BOX 133

MOULTRIE, GEORGIA

Three-Ply Airco Foundation



Twenty-two years ago this wonderful foundation was made available to the beekeepers. Inner ply contains hydrogenated vegetable wax as toughening agent to reduce comb distortion. During that time it has proven its superior qualities in hot and cold climates, in poor and good honey flows. Beekeepers have enthusiastically praised it for the following reasons:

- ... It does not sag*
- ... It does not melt down*
- ... It does not buckle*
- ... It has worker brood from top-bar to bottom-bar*

BEESWAX WANTED

Yes, we need beeswax to take care of the big market we have created for Root's famous Three-ply Airco Foundation. When you stop to consider the thousands of beekeepers located from coast to coast, commercial as well as small, who recognize the superior qualities of this foundation for brood and extracting combs, you will know we need tons of beeswax, not just pounds.

Your shipment, regardless of how small, will help. We pay freight charges on 100 pounds and over. The ceiling price of 41½¢ per pound cash, or 43½¢ per pound in trade still prevails. This is the highest price beeswax has brought for years.



THE A. I. ROOT CO.
MEDINA, OHIO

